

THE  
**MEDICAL JOURNAL**  
**OF AUSTRALIA**

VOL. I.—10TH YEAR.

SYDNEY: SATURDAY, JUNE 30, 1923.

No. 26.

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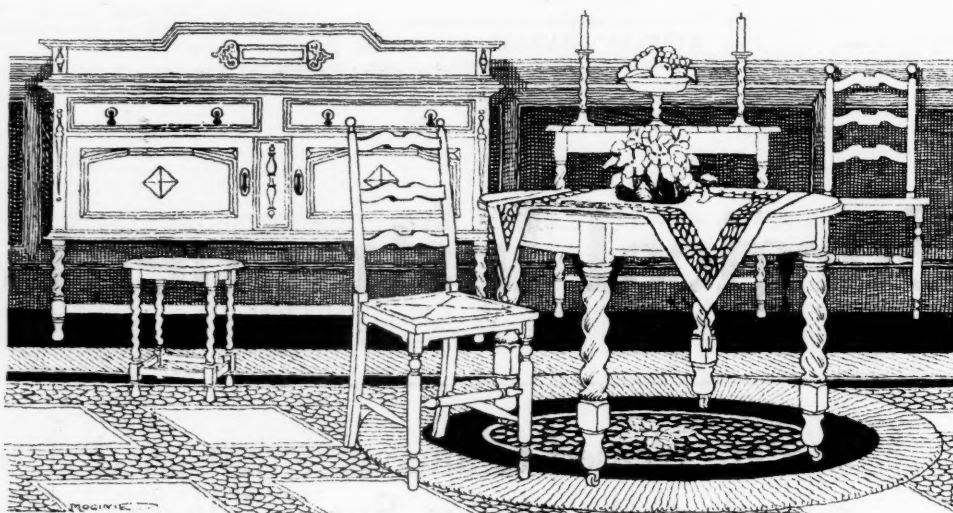
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### THE POSSIBILITIES OF ORGANIZATION OF THE PROFESSION THROUGHOUT THE STATE IN THE TREATMENT OF ACCIDENTAL INJURIES.<sup>1</sup>

By F. A. HADLEY, F.R.C.S. (England),  
Honorary Surgeon, Perth Hospital.

My interest was first drawn to the question of the treatment of accidents some seventeen years ago whilst practising in Sheffield. *The Workman's Compensation Act* had lately come into force and we saw for the first time large numbers of final results. I brought the subject then before the local Division of the British Medical Association and the interest taken by members paved the way for a certain degree of organization and for the establishment of an institute for after-treatment to which all medical practitioners could send their patients and yet keep in touch with them.

There has never been a period in the history of civilized nations in which the welfare of the individual has occupied public thought to such an extent. This is no doubt due to the pressure exerted by the masses rather than any new innate love of humanity on the part of the man in the street. But whatever the cause it must surely be to the advantage

of a nation if, without upsetting financial stability, the welfare of every individual is insured.

The public health bodies have developed with this object and have performed wonders. Our profession every day and all day long is at this work and is ably assisted by the hospitals, both public and private, and by the laboratories. Without the assistance of all these and of the members of the nursing profession its ability to cure would be much curtailed. I maintain, however, that in certain respects greater assistance should be given to the profession in order to allow medical practitioners to exercise to the fullest extent their ability to cure or to bring back to near to normal certain of their patients with whom they have to deal. The assistance should be given by the public who are the direct beneficiaries. The public cannot expect the profession to supply the expensive apparatus, organization and trained assistance necessary.

Unfortunately the public is extremely ignorant. If the mass of voters knew of the need, it would probably be willing to shoulder the burden. Men who have been through the late war, have learnt something of medical requisites and no doubt are to some extent interesting their friends, but the main teaching must come from ourselves, as there is nobody else who is capable of carrying it out. The particular need which I want you to consider

<sup>1</sup> Read a meeting of the Western Australian Branch of the British Medical Association on May 16, 1923.

tonight, is that for greater facilities in treating accidental injuries. I doubt if any of us, when suddenly called upon to treat an injury, has not a sort of feeling that he is being called upon to shoulder a responsibility which under present conditions is almost unfair. The difficulties in the way of getting the best result are in many cases so great. I have never been able to understand why public health bodies should, apart from their great work of preventing disease, consider that their duties ought to be confined to organizing treatment for diseases caused by germ or parasite. Certainly these used to be the greatest offenders, but in many instances the departments now have them in hand, although others, such as tuberculosis, influenza, scarlet fever and syphilis still raid where they will amongst the helpless community. Vast sums of money are being spent on the war against these diseases and we hope and believe that victory is not far off. In the meantime are we not, whilst engaged on this front, allowing a most serious inroad to be made on another without taking any measures to stem it? How often one hears of some man who got his arm jammed a year ago, but his fingers are still too stiff for work, or one who broke his leg and is getting about on a stick, while the insurance company is still paying him! In the Perth Hospital alone last year four hundred and forty-six fractures and dislocations necessitated X-ray examination. I wish I could give the figures for such injuries in the whole State. They must be very large. During the same period fifty-nine patients were treated for typhoid fever and three hundred and ninety-three for diphtheria. There was no small-pox. I have not obtained the number of new patients admitted to Woorooloo, but I think there is little doubt that there are as many, if not more, persons with fractures and dislocations than with infective diseases.

Yet enormous sums of public money are spent in treating the latter and very little in treating the former, except that some of them, it is true, fill beds for long periods in the hospitals and many of them could pay for private treatment, if certain facilities were available. I have discussed this matter with many of the insurance companies in Perth. Needless to say they are extremely interested in it, although apparently it had not occurred to them before. They have very kindly taken much trouble in supplying me with their figures, but would prefer the details not to be published. These figures support my contention that the length of disability from a fracture is unduly long and the final result in many instances unsatisfactory.

What proportion of persons who have sustained fractures in this State, return to their previous work or earn their previous wage? It is impossible to get at the figure. Could the proportion be improved? And how? That is what I ask you to discuss tonight. I have indicated what I consider the most important thing, money. This, I believe, can be obtained by educating the public who at present have no idea of the difficulty we experience in obtaining good results. The second point is organization throughout the State, so that no patient should go poorly treated for lack of opportunity.

I do not think that I am exaggerating when I say that eight out of ten fractures are treated more satisfactorily if an X-ray examination be carried out within a week of the accident and again during the treatment. A better and far quicker end-result would be obtained in a large proportion of patients if they could be given the benefits of a well-equipped orthopaedic department. Centres could be instituted about the State for these two purposes. A beginning has been made in that the Government is helping local bodies to obtain X-ray plants. But even here in Perth we are only on the brink of having an orthopaedic department.

Nothing has been done towards organizing the profession which, as I have previously stated, would jump at the opportunity to share the responsibility with others.

The majority of patients with fractures can travel some time within the first week, but for this each township in which a doctor is living, should have a selected supply of splints suitable for the purpose. And these supplies should be refilled on requisition from central stores and should be Government property. The splints should be made cheaply in large numbers by contract. Again, in the centres some scheme should be worked out by which patients who do not need nursing, could be housed while attending the orthopaedic centre. After the X-ray examination many could return to their own homes, to come in again later for final treatment when the bone was firm.

I am treading, perhaps, on delicate ground, but I believe that practitioners working alone would often welcome advice as to the simplest methods of treatment, if this advice were given through the Principal Medical Officer who could form a committee for the purpose of assisting him. I am inclined to think that notification of fractures might be useful. In fact, granted money, organization and a willingness to cooperate on the part of the profession, I believe an immense amount of improvement on the present results could be obtained.

I hope that members will discuss the subject freely this evening.

#### THE TREATMENT OF INEQUALITY OF LENGTH IN THE LOWER LIMBS.

By N. D. ROYLE, M.B. (SYDNEY),

*Honorary Orthopaedic Surgeon to the Lewisham Hospital;  
Honorary Orthopaedic Surgeon to the State  
Children's Relief Board.*

THERE is probably no more conspicuous disability than that caused by inequality in length of the lower limbs. As a detractor of personal appearance this deformity is particularly burdensome to girls and relief is usually sought by recourse to massage or by endeavouring to equalize the length by an alteration in footwear. Massage produces very little apparent effect in such a deformity and the alteration in footwear hands the patient over to a life-long dependence on the bootmaker. It is far better in certain cases to equalize the length of the lower limbs by some operation upon the bony skeleton.



The lengthening of the shorter limb would be the most desirable alteration were this possible to any extent, but unfortunately the difficulties in the way of producing more than a small amount of lengthening are so great as to render the procedure ineffectual in most instances. It is easier and more satisfactory to remove a section of bone from the longer limb.

This was done in five patients who suffered from unequal length in the lower limbs. The cause of the inequality in four was anterior poliomyelitis; in the fifth, osteomyelitis was responsible for the loss of a section of the shaft of the right tibia.

#### The Technique of Operation.

In four instances shortening was carried out by excising a piece of the femur. In each instance the femur was approached from the lateral aspect, just above the line of the lateral intermuscular septum. The femur in this position can often be exposed without having to ligate a blood vessel and with very little interference to the musculature. The length to be removed was first of all marked on the periosteum and the bone was then divided by means of a hand drill. The bone was drilled from the lateral aspect in three places so that when complete there were actually six drill holes in the circumference of the bone. It was very easy then to cut with a sharp osteotome between the drill holes and remove the section of bone with a minimum of trauma. The tibia can be treated in exactly the same fashion without any more difficulty. This method has the advantage of leaving surfaces which interlock easily with one another and which do not present any possibility of failure to unite owing to death of the bone cells in the approximated areas. When compared with the removal of bone by means

of an electrically driven saw, the method has the merit of simplicity. There is an absence of complicated gear and it is practically as rapid. An intra-medullary splint to prevent lateral displacement of the two divided ends was made from the excised piece of bone. On one occasion, in one of the earlier instances, I used an ordinary Lane's plate to hold the bones in position, but I prefer the above method. The fixation of the limb after excision of the piece was carried out by applying plaster of Paris from the foot to a position above and including the pelvis. This is done more easily and with more certainty if the plaster is applied to the limb and allowed to harden before

the pelvic section is applied. Fixation was carried out for six or eight weeks after which the patient wore a Thomas's knee splint until union was satisfactory.

#### Details of Cases.

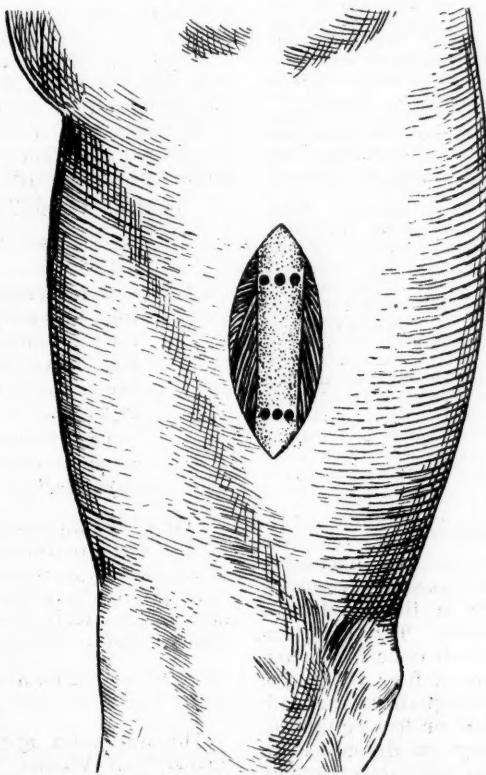
Case I.—A female, aged nine years, had suffered from acute anterior poliomyelitis eight years previously; the right lower limb had wasted and there was paresis of the quadriceps and of the peroneal muscles. The whole limb was over five centimetres (two inches) shorter than the left lower limb. An operation for shortening the longer limb was performed in September, 1919.

Case II.—A female, aged eleven and a half years, had suffered from acute anterior poliomyelitis nine years previously. Complete paralysis of the right leg was present, the muscles of the thigh were parietic and the whole limb was over five centimetres (two inches) shorter than the left limb, which appeared to be normal. Operation for shortening was performed in February, 1920.

Case III.—A male, aged twelve years, had suffered from acute anterior poliomyelitis eleven years previously. The right lower limb had wasted and was 6.75 centimetres (two and a half inches) shorter than the left lower limb. Shortening operation was performed in March, 1920. Considerable difficulty and anxiety was occasioned in this instance by the wound becoming soiled with faeces. Infection of the tissues with gas forming organisms followed and was treated with continual "Eusol" irrigation. The acute condition subsided and healing took place slowly with excessive callus formation but eventual good union.

Case IV.—A female, aged twenty-five years, had suffered from a disability of the left lower limb during her whole life. *Talipes calcaneo-varus* with paralysis of the plantar flexors of the ankle joint was present. The nerve supply of the left foot was defective and this had led to the formation of trophic ulcers. The left limb was five centimetres (two inches) shorter than the right and scoliosis with the greatest convexity in the right thoracic region was also present. The shortening operation was performed in November, 1922.

Case V.—In the fifth patient, acute osteomyelitis had been responsible for the loss of a section of the shaft of the right tibia nine years previously. The whole leg had undergone atrophy. As a result of loss of support from the tibia, some *genurecurvatum* was present and there was actually a difference of twelve centimetres (five inches) in the length of the legs. There was also definite outward bowing of the fibula present. This permitted the attenuated ends of the tibia to approximate one another. The whole limb had to be supported by a large and heavy apparatus extending from the hips to the foot. The only practical method of dealing with the condition of the tibia was to use a massive bone graft and, since there was such inequality in the length of the legs, I took the opportunity of suggesting the removal of the whole of the sound tibia for a definite section and at the same time of shortening the fibula in the sound limb so that the legs should be equal in length. The sound tibia was removed



OPERATION FOR SHORTENING OF LIMB.

Figure showing drill holes in femur prior to the use of the osteotome.

for a length of ten centimetres (four inches). The bed for the graft was prepared by flattening the anterior surfaces of the ununited fragments of the tibia and flaking the surfaces with an osteotome. The fibula was then fractured and 2.5 centimetres (one inch) in length gained in the short limb. The graft, composed of half the thickness of the sound tibia, was fixed in position by means of bone screws, healed by first intention and gave no further trouble. My previous experience in shortening had all been confined to the femur and I did not anticipate the amount of trouble that would arise from removing a section of bone in the leg. In the sound limb, it was easy to approximate the remaining section of the tibia and fibula, but I had the greatest difficulty in getting the skin to cover the area of operation. Secondly, after the plaster to fix the limb had been placed in position and the tourniquet had been removed, an alarming circumstance was noted, namely, the colour did not return to the foot. This I discovered was due to the fact that the blood vessels, lying as they do close to the tibia, must have been forced into the shape of a loop and as the weight of the limb pressed on the plaster they were practically obliterated. The condition was relieved by resting the weight of the limb on a pillow placed under the thigh. The limb itself, in this instance, added to the difficulties as it was large and muscular. But of course the obvious error in technique on this occasion was in endeavouring to spare the patient the ordeal of a second operation rather than being content to wait until the muscles had accommodated themselves to the shortened position of the skeleton. The frequency with which fractures of the lower third of the tibia fail to unite appears to be due to actual rupture of the anterior tibial artery at the site of fracture. This, however, does not constitute a contra-indication to a shortening operation, since the removal of a section of both bones can be done without interfering with the artery and union should take place normally under favourable conditions. The subsequent history of this case presented many surgical problems on account of sloughing of the edges of the wound. This led to exposure of the anterior surface of the lower fragment of the tibia. A wedge-shaped sequestrum, which was about 2.5 centimetres (one inch) long and 0.6 centimetre (a quarter of an inch) thick at the upper end and extended across the anterior surface of the tibia, separated and had to be removed before the wound closed. The union of the divided ends took place more slowly than is usually the case, but eventually in quite a satisfactory manner.

#### The Results of Treatment.

An important question that arises in discussing the shortening operation is the possibility of inequality again appearing between the lengths of the two limbs in growing children. The operation in three of these patients has been done for a considerable period, the longest almost four years ago. In none of these is there any inequality now and, since the weight bearing is more or less equalized, there should be little tendency for difference to appear at a later date. All the patients expressed great satisfaction at the improvement in their appearance and in their movements. In the case of the patient whose sound limb was shortened ten centimetres, the result has been equally satisfactory. The *genu recurvatum* has disappeared. She is now able to bear her whole weight on what was the unsound limb and is able to walk without any assistance whatever. When last examined about nine months after operation the only disability noticeable was a slight limp and in a report one year after operation the patient said that the result had been well worth the time and trouble spent upon it. In every patient in this series, with the exception of the fifth, some other surgical treatment in addition to the shortening operation had to be

carried out to remedy other defects in the shorter limb. In shortening the femur neither the muscles nor the skin presented any difficulty and the patients were able to use the shortened limb in a normal manner.

#### TWO PANCREATIC FUNCTIONAL TESTS.<sup>1</sup>

BY GORDON CAMERON, M.B., B.S. (MELBOURNE),  
Stewart Lecturer in Pathology,  
University of Melbourne.

THE object of this paper is to discuss the value of two so-called tests of pancreatic activity. For this purpose one hundred and sixty-one patients have been examined. The results wherever possible have been checked by operation, *post mortem* examination or certain other methods of investigation, as for example, the Wassermann reaction, X-ray examination and the usual bio-chemical tests. While it is not claimed that any original work has been done, it is hoped that a new aspect on these tests may be presented. The routine investigation of the majority of the patients has included:

- (i.) The adrenalin eye test.
- (ii.) Estimation of the diastatic content of the urine.
- (iii.) Careful examination of the urine, following Cammidge's<sup>2</sup> plan of investigating for the following: Albumin, sugar, indican, bile salts and pigment, urobilin, acetoacetic acid, acetone and calcium oxalate crystals.

It has not been possible to examine for ammonia-nitrogen content nor "pancreatic crystals."

- (iv.) The microscopic examination of the faeces.

It is to be regretted that a chemical examination of the faeces was impossible, but all of the work was done purely from the clinical side and in some instances the tests were carried out in the short interval before operation.

#### THE ADRENALIN EYE TEST.

##### Historical.

The adrenalin eye test was first described by Loewi,<sup>3</sup> of Vienna, in 1908. Loewi noticed that when adrenalin was applied to the eyes of depancreatized dogs and cats, mydriasis resulted within an interval of one hour. When this test was used in the case of human beings, a reaction was obtained in patients who were suspected of suffering from disorder of the pancreas. In ten out of eighteen patients suffering from *diabetes mellitus* a reaction resulted. But in one out of three patients with exophthalmic goitre, a reaction was also obtained. The former results were held to be indicative of a pancreatic origin for diabetes. The latter was regarded as being due to irritability of the sympathetic nervous system.

<sup>1</sup> Part of a thesis for the Bertram Armytage Prize for Medical Research.

Doubts have been thrown on the specificity of the test by various observers. Garrod,<sup>(1)</sup> while considering Loewi's reaction in conjunction with various other tests as being of great value in the diagnosis of pancreatic insufficiency, says that it is by no means constant. He obtained a reaction only on one occasion in exophthalmic goitre. Jelliffe and White<sup>(2)</sup> say that a response to Loewi's test is frequently obtained in exophthalmic goitre, pancreatic diabetes and in increased irritability of the sympathetic nervous system in general, as well as in disturbances of the anterior and middle cranial fossæ, *exampli gratia*, orbital disease, fracture of the base of the skull.

Humphry<sup>(3)</sup> found the adrenalin and diastatic tests of great value in the diagnosis of a pancreatic cyst and a probable pancreatic infection.

Cockroft<sup>(4)</sup> failed to obtain response in a patient who was suffering from neoplastic disease of the biliary passages and in whom the pancreas was free from disease, whereas in a patient in whom the pancreas was almost completely disorganized, a reaction was obtained.

Langdon Brown<sup>(5)</sup> says that the most reliable signs of organic disease of the pancreas are excess of unsplit fat in the stools, high diastatic content in the urine and the adrenalin eye test. On the other hand, Curschmann<sup>(6)</sup> goes so far as to say that a mydriasis commencing in half to three-quarters of an hour and lasting in some instances ten to eighteen hours is of great value in the diagnosis of thyreotoxicosis as a cause of cardiac disturbance.

Sladden<sup>(7)</sup> obtained mydriasis in eleven of fifty-one patients examined. Pancreatic disease was demonstrated in five of these eleven patients; in four it was thought probably to be present; in one it was excluded at operation and in the eleventh patient exophthalmic goitre was present. No reaction was obtained in eight patients suffering from *diabetes mellitus*, three patients suffering from glycosuria, two patients suffering from exophthalmic goitre, three patients suffering from cirrhosis of the liver, one from acholuric jaundice, one from cholelithiasis and one from catarrhal jaundice. He concluded that at most three out of forty patients in whose pupils no reaction was obtained, may have had some pancreatic lesion.

Fuller and Chambers<sup>(8)</sup> instilled adrenalin into the conjunctival sac of the eye of one hundred patients. Forty-eight of these were suffering from *dementia præcox* and of the forty-eight, thirty-four gave a reaction, the reaction being a mydriasis in twenty-six and a miosis in eight. No reaction occurred in any of the thirteen patients suffering from manic-depressive insanity and a reaction occurred in six of thirteen patients suffering from paresis. It is suggested that "in adrenalin mydriasis a valuable though not absolute clinico-diagnostic test for differentiating *dementia præcox* from manic-depressive insanity is available."

Mackenzie Wallis<sup>(9)</sup> obtained a reaction in a patient with *diabetes insipidus* who had definite signs of involvement of the pituitary gland.

Certain patients with chronic nephritis appear to yield a reaction. Hence it is evident that the specificity of this test has been questioned by many observers.

#### The Test.

The method used throughout this investigation has been as follows: Both eyes are first examined for pupillary reactions, signs of previous disease, deformity *et cetera*.

Two drops of a fresh solution of 1 in 1,000 adrenalin are then allowed to flow gently into the conjunctival sac of the right eye and the patient afterwards keeps the eyelids closed for a few seconds. This is repeated five minutes later. The size of the pupil is then noted at intervals of half, one and two hours from the performance of the test. The patient usually remains quietly in bed during the whole time and is kept free from any excitement, although there appears to be no objection to him sitting up or even moving about.

The results are recorded as "+" or "-" according to whether there is dilation of the pupil or no reaction during the above periods. A typical strong reaction is as follows:

Time	.. ..	½ hour.	1 hour.	2 hours.
Result	.. ..	+	+	+

A moderate reaction may be:

Time	.. ..	½ hour.	1 hour.	2 hours.
Result	.. ..	—	+	—
		+	—	—

Occasionally a preliminary contraction of the pupil is noticed before dilation, as, for example, in a patient with exophthalmic goitre. On several occasions there was a transient miosis, without any further sign, as, for example, in a patient with pneumonia.

#### Results.

##### Disease of the Pancreas.

**Acute Pancreatitis.**—Only one patient with acute pancreatitis was examined. The result of the eye test was "+" before operation and the diastatic content of the urine was high, so that a diagnosis of acute pancreatitis was made. This was confirmed at operation.

**Subacute Pancreatitis.**—Of four patients suffering from subacute pancreatitis whose condition was subsequently confirmed by operation, three gave definite reactions, while no reaction was obtained in the other.

**Chronic Pancreatitis.**—One patient suffering from chronic pancreatitis and empyema of the gall bladder gave a "+" reaction.

**Carcinoma.**—Three patients with carcinoma were examined. Two gave reactions and one did not. The diagnosis was confirmed in all three by *post*



*mortem* examination. Included in this group in addition to the above are six patients in whose conditions a diagnosis of pancreatic disease has been made, which has not yet been confirmed. Three were regarded as suffering from chronic pancreatitis, two of them gave "+" results. Three were regarded as suffering from malignant disease and in all of them the test produced no mydriasis.

*Conditions in which Pancreatic Insufficiency might be Expected.*

*Gastric Lesions.*—In the patient with a fistula following a gastrectomy, a "+" result was obtained. One patient with duodenal ulcer, two with gastric ulcer and one with gastro-enteritis failed to give a reaction. Of two patients with gastric carcinoma, one gave a "+" result, the other a "—" result.

*Biliary Lesions.*—Of nine patients with cholelithiasis, eight gave "+" results. Two patients with cholecystitis gave "+" results. The only patient with cirrhosis of the liver examined gave a reaction. Of two patients with toxic jaundice, one gave a "+" and the other a "—" result. Of two patients with catarrhal jaundice, one showed a reaction. One patient with "Salvarsan" jaundice, one with hæmolytic jaundice, one with carcinoma of the gall bladder gave "+" results. A patient with a hydatid cyst of the left lobe of the liver gave a "—" result. Hence, of twenty patients with biliary trouble, sixteen (80%) gave positive results.

*Intestinal Lesions.*—Five patients with intestinal lesions were examined. Of these, two gave reactions. One patient was a girl, *ætatis* eighteen years, with typhoid fever, who developed parotitis and *otitis media* during the fourth week. At this stage the Loewi test yielded a "+" result. The other patient was also a girl, *ætatis* eighteen years, whose condition was diagnosed as acute appendicitis; the diagnosis was confirmed by operation. This same patient had an enormous diastatic value, with sugar, diacetic acid and acetone in her urine. Unfortunately the pancreas was not examined during operation.

*Arterio-sclerosis.*—Patients with arterio-sclerosis who were examined, were classified into two groups. The first group of patients suffered from arterio-sclerosis without signs of chronic nephritis. Three patients out of five in this group gave "+" results. Those in the second group suffered from arterio-sclerosis with signs of chronic nephritis. Of nine patients in this group, six gave "+" results. In both groups those patients giving reactions were passing urine which was of low diastatic value.

*Endocrine Disturbances.*

*Disturbances of the Thyroid Gland.*—Two patients with myxædema were examined; one gave a positive reaction. Five patients with exophthalmic goitre all gave reactions. Two patients whose condition was diagnosed as thyrotoxic goitre, both gave reactions.

*Disorders of the Ovary.*—Reactions were given by a patient with sarcoma of the uterus associated with atrophy of the ovaries after a pan-hysterectomy had been performed and by a woman who had

definite glycosuria which cleared up after removal of a myomatous uterus. In a pregnant woman no reaction was obtained.

*Disorders of the Pituitary Gland.*—A patient suffering from a pituitary tumour gave a reaction.

*Metabolic Disturbances.*

*Toxæmias and Infectious Diseases.*—Two patients out of five with pulmonary tuberculosis gave reactions. Five patients out of fourteen with lobar and lobular pneumonia gave reactions. A patient with pulmonary abscess gave a reaction.

*Senility.*—One senile patient suffering from definite fibrosis of the lungs and chronic nephritis gave a reaction. Another senile patient, in whom *osteitis deformans* was present in a mild degree, also gave a reaction. Two other patients failed to give a reaction.

*Cases of Doubtful Ætiology.*

*Joint Conditions.*—The results obtained by applying this test to patients suffering from joint conditions were interesting and rather surprising. Seven patients with *arthritis deformans*, of the general, progressive and monarticular varieties, all gave reactions. Three patients with spondylitis failed to give a reaction. One patient out of three with rheumatic fever gave a reaction. Of three patients with infective arthritis, one gave a reaction and a reaction was obtained in a patient with Charcot's joint.

*Nervous Disturbances.*—A reaction was obtained in a case of a patient with a fractured base and another with a mild syphilitic myelitis. Two patients with cerebro-spinal syphilis failed to give a reaction.

*Anæmias.*—Two patients with chlorosis did not yield a reaction. In a patient with pernicious anæmia a reaction was obtained.

*Miscellaneous Conditions.*

In addition to the above, four patients with *diabetes mellitus* and two with glycosuria of unknown origin were examined and "—" results were obtained in every instance.

*Résumé.*

It will be seen that reactions have been obtained in patients suffering from conditions of quite a varied order. The vast majority of patients with actual pancreatic lesions gave reactions. The group in which pancreatic insufficiency might be expected, presented interesting features. Of patients with biliary lesions 80% were associated with reactions. The two reactions in the gastric group were probably due to associated pancreatic disease, the ulcer in the patient on whom gastrectomy was performed, was adherent to the pancreas and in the patient with carcinoma secondary deposits were present in the glands and the growth probably involved the pancreas. The two reactions in the group of patients with intestinal lesions were suggestive of a pancreatic factor, for pancreatic disturbance is well known in typhoid fever and acute appendicitis is often accompanied by severe reflex disturbance in the intestinal tract. Of patients with arterio-sclerosis 64% gave reactions. The majority of these were suffering from chronic nephritis and this agrees with the findings of other observers. The



uniform results obtained in patients with exophthalmic goitre and thyrotoxic goitre differ from the results of other observers. Reactions in patients with ovarian disturbance and in the patient with lesion of the pituitary gland suggest the presence of an endocrine factor in these conditions. Reactions in patients with toxæmia and metabolic disturbances are difficult of explanation. In one patient with hyperacute pneumonia, reaction was obtained twelve hours before the appearance of jaundice. On *post mortem* examination the pancreas was found to be very soft and congested.

Perhaps the most interesting result is that obtained in the patients with *arthritis deformans*, excluding spondylitis. Fisher<sup>(11)</sup> in the Hunterian Oration of 1922 mentioned endocrine disturbance as an ætiological factor in osteo-arthritis and the consistent reactions in patients of both groups is rather suggestive of this. The "—" results in patients with *diabetes mellitus* seems to be against a pancreatic basis in the condition.

We must conclude from these figures that the adrenalin eye test is certainly not a specific test of the function of the pancreas. The result of the test is "+" in actual pancreatic disease and in many instances probably indicates some pancreatic disorder.

But there are many conditions in which a pancreatic basis can be excluded and in these we must look for another factor. Loewi's suggestion of increased irritability of the sympathetic nervous system is interesting, but difficult to prove, especially in such conditions as *arthritis deformans*.

In order to test this theory experiments were carried out on seven normal males. An injection of 0.5 cubic centimetre of a 1 in 1,000 solution of adrenalin was given subcutaneously to each and the adrenalin eye test was then performed. Adrenalin when given subcutaneously in moderately large doses is supposed to increase the activity of sympathetic nerve endings, including those of the pupil. Hence, if Loewi's theory be correct, we should expect to find a reaction to the adrenalin test in each person. The pupil was examined every quarter of an hour for two hours and in no instance was a reaction obtained.

Thyroid extract which is said to increase the irritability of the sympathetic nervous system when given in small doses to a patient, was equally unsuccessful in producing a reaction.

Since carrying out these experiments, my attention has been drawn to a paper by Hoskins and Gunning<sup>(12)</sup> in which it was shown that following pancreatectomy in animals the adrenalin mydriasis test produces a reaction, but that there is no evidence of increased sympathetic irritability as judged by alterations in blood pressure.

#### Conclusions.

(1) The adrenalin eye test generally yields a reaction in patients with pancreatic disturbance.

(2) Uniformly positive results are obtained in patients with conditions of increased thyroid activity and disturbances of other endocrine glands.

(3) In patients with *arthritis deformans* of the general progressive or monarticular forms a reaction is often obtained.

(4) Increased irritability of the sympathetic system does not explain the reaction obtained in patients other than those with pancreatic disturbance.

(5) Patients with *diabetes mellitus* often fail to yield reactions. This is in agreement with Sladden's findings.

#### THE URINARY DIASTATIC TESTS.

##### Historical.

The measurement of the diastatic content of the urine was originally introduced by Wohlgemuth<sup>(13)</sup> as a means of diagnosis in diseases of the pancreas and his work has been confirmed and extended by many workers, amongst whom may be mentioned Corbett, Cole, Mackenzie Wallis, Garrod and Hartley.

Corbett<sup>(14)</sup> found that the daily value, as ascertained by using Wohlgemuth's system of estimation, was between 6.6 and 33.3 units. Readings in renal disease were either normal, subnormal or zero, whilst values up to 100 units were found in certain acute infective conditions without pronounced renal damage. The only readings found above this mark were those in the urine from patients with pancreatic disease and certain forms of eclampsia. The urine of the patients with undoubted pancreatic disease gave high readings whether the disease was due to malignant or inflammatory processes. In diabetic urine subnormal readings were generally found and large alterations in the total amount of urine or sugar passed for twenty-four hours had little or no effect on the value.

Stocks<sup>(15)</sup> confirmed this association with pancreatic disease and showed that the increase depended on the degree of obstruction in any part of the gland or its ducts and the acuteness of the lesion. He found the highest values in acute pancreatitis.

Garrod<sup>(16)</sup> says that the estimation of diastase in urine affords "one of the best and most useful tests of the integrity of the pancreas and at the same time one of those most easily and rapidly carried out."

Mackenzie Wallis<sup>(17)</sup> emphasizes the fact that the diastatic increase in urine in pancreatic disease is a temporary incident, most conspicuous in the earlier stages. Wallis also found that a high diastatic value was a constant finding in the urine of patients with eclampsia and certain toxæmias of pregnancy.

Dodds<sup>(18)</sup> noted a high diastatic value in infantile rickets, together with the presence of fatty stools and suggested a pancreatic factor in that disease.

Although the influence of variations in the hydrogen ion concentration of the enzyme solution had been noted for some time by Cole,<sup>(17)</sup> it was not till last year that attempts were made to correct for this factor. Dodds<sup>(18)</sup> found that the optimum reaction for urinary diastase in the presence of phosphate was pH=6.1 and using a modified technique

whereby the urine was diluted with a phosphate buffer solution he was able to bring the urine to the optimum pH before its starch digesting power was tested.

Sladden<sup>(4)</sup> also introduced a method for correction of this factor which has been described in a previous communication.<sup>(5)</sup> He found that low diastase values were, as a rule, definitely indicative of nephritis, but pointed out that the urine of all nephritics is not characterized by lowered diastatic values. Neither do all types of pancreatic lesion cause excessive output of diastase, for two patients with tumour of the pancreas passed urine the diastatic value of which was four and ten units.

It will be seen that the diastatic content of urine may vary in one of two ways, firstly: through alterations in the production of diastase, especially in pancreatitis, and secondly through interference with the excretion into the urine, especially in nephritis (Dodds).

A high diastatic value has been obtained in the urine of patients with pancreatic disturbance, especially of an inflammatory nature, of patients with eclampsia, of patients with acute infective conditions (by Corbett only) and in the urine of patients with infantile rickets. A decreased diastatic value has been found in the urine of patients with nephritis, of patients with *diabetes mellitus* and in the urine of those with tumours and atrophic conditions of the pancreas.

#### The Method.

It is not proposed to describe in detail the Wohlgemuth technique. Full descriptions are given in Corbett's, Dodd's and Sladden's papers quoted above. As to the advantage of Dodd's method over Sladden's or *vice versa* nothing can be said at present, as the question is still under observation. In this investigation, with the exception of the earlier estimations, Sladden's method has been used uniformly.

It is necessary to use a twenty-four hour specimen of urine in order to obtain accurate results. Failing this Mackenzie Wallis<sup>(6)</sup> recommends a twelve hour or even a six hour specimen.

#### Results.

##### Diseases of the Pancreas.

The urine of the patient with acute pancreatitis showed a diastatic value of seventy units before operation. Death occurred within twenty hours of the operation.

In the patients with subacute pancreatitis urinary diastatic values varied between fifty and one hundred and fifty units and gradually decreased as the patients improved.

In the urine of the patient with chronic pancreatitis, a value of fifty units was obtained.

In the urine of the three patients with carcinoma, the values were respectively ten, twenty and four. These were well within the limits of normality. In cases in which the diagnosis was in doubt, the values ranged from three in a patient thought to be suffering from malignant disease of the pancreas to one

hundred and fifty in a patient with chronic inflammation.

#### Conditions in which Pancreatic Insufficiency might be Expected.

**Gastric Lesions.**—With the exception of the patient with gastric fistula, in whose urine a value of two hundred was obtained and another patient with gastric ulcer in whose urine the value was seventy, the values were all below twenty-five units.

**Biliary Lesions.**—In the patients with cholelithiasis the diastatic values varied between eight and eighty units. In the urine of the patient with cirrhosis the value was forty; in the urine of those with toxic jaundice the values were respectively four and five units, whilst of two patients with catarrhal jaundice the urine of one showed a value of three units and there was no response to the adrenalin eye test; the urine of the other gave a value of seventy units and reaction to the adrenalin eye test was obtained. The urine of the patient suffering from "Salvarsan" jaundice showed a value of fifty units. In the urine of the patients with carcinoma of the gall bladder and hydatid of the liver the values were respectively forty and twenty-five units. In the urine of two patients with cholecystitis the values were fifty and one hundred units.

**Intestinal Lesions.**—In the urine of patients with intestinal lesions the values were, with two exceptions, below ten units. In the urine of a patient with typhoid fever the value rose to one hundred units and in the urine of a patient with appendicitis the value also was one hundred units. In both of these there was an accompanying "+" reaction to the adrenalin eye test.

**Arterio-sclerosis.**—In the urine of nine patients out of fourteen with arterio-sclerosis the values were increased and varied between thirty and one hundred units. The smallest values were found in the urine of patients with associated chronic nephritis.

#### Miscellaneous Conditions.

The urine of the remaining patients examined showed values within normal limits, with the exception of that of two senile patients in whose urine the values were one hundred units. In the urine of a patient with syphilitic myelitis a value of fifty units was found. The urine of four patients with *diabetes mellitus* showed values as follows: Three units in two instances and seven units in two instances.

#### Résumé.

From these results it is evident that we have a very useful test in the diagnosis of pancreatic disturbance and that Garrod's statement is thus confirmed. Corbett's finding that values up to one hundred units were found in the urine of patients suffering from certain acute infective conditions was not confirmed. The urine of thirty-six such patients examined all gave low values. This was remarkably constant, even with repeated examinations. Neither is there confirmation of his statement that high readings are found in the urine of all patients with undoubted pancreatic disease, whether due to malignant or inflammatory processes. The urine

of three patients with undoubted pancreatic carcinoma give low values. This agrees, on the other hand, with Sladden's findings.

The results in *diabetes mellitus* agreed completely with those of Corbett. Probably the comparatively moderate value found in the urine of the patient with acute pancreatitis was an example of Mackenzie Wallis's statement.

The findings in many of the biliary lesions are illustrative of the close relationship between the liver and pancreas, especially in disease. This result is of special interest in the light of later work by Cammidge, Forsyth and Howard,<sup>(20)</sup> who suggest that the amylolytic ferment of the blood and urine is derived mainly from the liver and that the internal secretion of the pancreas functionates "as a brake on the glycolytic activities of the liver ferment." Possibly the low diastatic values found in carcinoma of the pancreas, where a considerable portion of the gland is put out of action, might be taken as a contrast to the above views, whilst the greatly increased values in inflammatory conditions of the pancreas, where there is increased vascularity of the organ and surely increased absorption, are most suggestive of a pancreatic basis, though they do not necessarily exclude an hepatic source as well.

The high diastatic value and a reaction to the adrenalin test in one of the patients with catarrhal jaundice might well be evidence in favour of Mayo Robson's and later Phillips's<sup>(21)</sup> suggestion that pancreatitis accounts for many so-called cases of catarrhal jaundice.

#### Conclusions.

(1) An increased urinary diastatic value accompanies lesions of the pancreas, with the exception of malignant disease and certain atrophic conditions (Sladden). This result is very reliable.

(2) In *diabetes mellitus* the value is either normal or subnormal.

#### NOTES ON URINARY FINDINGS.

Sugar was present in the urine in one patient with subacute pancreatitis and one patient with malignant disease of the pancreas. Of the various other patients with glycosuria there was in all either a suggestion of some pancreatic disturbance or else of an endocrine disorder.

Indican was present in the urine of one patient with pancreatic disease only.

Bile was present in the urine of two out of three patients with malignant disease of the pancreas. Urobilin was not found.

Aceto-acetic acid and acetone were detected in the urine of one patient with pancreatic disease.

Calcium oxalate crystals were present in the urine of one patient with subacute pancreatitis, of two patients with carcinoma of the pancreas and of one patient with catarrhal jaundice.

None of the urinary findings were constant nor were they found with any degree of frequency.

#### NOTES ON EXAMINATION OF THE FÆCES.

Muscle fibres showing striations and sometimes nuclei, connective-tissue fibres, elastic fibres, fat globules, fatty acid crystals and calcium oxalate crystals were found in the faeces of every patient with pancreatic disease examined.

In the faeces of 50% of the patients with arteriosclerosis muscle fibre in moderate quantity were detected.

The faeces of a patient with pernicious anaemia showed many muscle fibres with marked striations, connective-tissue fibres, fat globules and fatty acid crystals in abundance. The adrenalin eye test in this patient yielded a reaction and the diastatic value of the urine was normal. The carbo-hydrate tolerance was greatly increased, so that the possibility of a pancreatitis being the cause of the anaemia was suggested. Mayo Robson and Cammidge<sup>(22)</sup> record similar cases.

#### ACKNOWLEDGEMENTS.

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Sister Fisher has been of the greatest help in practical details.

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## Reports of Cases.

### RUPTURE OF DEEP FEMORAL ARTERY IN A PATIENT WITH INFECTIVE ENDOCARDITIS.

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I AM indebted to Mr. T. E. L. Lambert for permission to publish a report of the following case:

G.S., aged forty years, male, a labourer living at Ascot Vale, was admitted to hospital on February 23, 1923, complaining of pain in the left thigh for preceding three weeks. He had been able to work until seven days before admission when pain became so severe that he went to bed. There was no story of injury to the thigh.

He gave a history of phthisis in youth: he had been in Egypt and in France, where he was gassed, but he had no sickness while abroad with the exception of a doubtful syphilitic chancre four years ago. He had received very vigorous anti-specific treatment. During the month before admission he had felt weak and easily tired.

Examination revealed a very pallid man with injected venules on the face. His temperature was 37° C. (98.8° F), the pulse rate was 136 to the minute and the respiration numbered twenty-four. The pulse was regular and "water-hammer" in character. Capillary pulsation was present. The systolic blood pressure was 180 millimetres of mercury and the diastolic 60 millimetres of mercury in both brachial arteries.

The apex beat of the heart was in the sixth intercostal space 12.5 centimetres (five inches) to the left of the middle line. No right cardiac dullness was demonstrable. On auscultation systolic and diastolic murmurs were heard at the aortic area, the diastolic murmur was conducted down the sternum. At the mitral area presystolic, systolic and diastolic murmurs were heard. Examination of lungs, abdomen and central nervous system at this stage revealed nothing abnormal. The specific gravity of the urine was 1012, the reaction was acid, and it contained no sugar and no albumin. Microscopical examination showed a large number of epithelial cells and hyaline casts.

The patient's serum did not react to the Wassermann test. On the medial surface of left thigh was a large indurated fusiform swelling slightly painful on pressure—not fluctuant and not pulsatile.

Four days later, February 27, 1923, he cried out because of a sudden severe tearing pain experienced in the postico-medial part of the left thigh.

On examination it was found that the swelling had enlarged and was very tense. Pulsation could still be detected in anterior and posterior tibial arteries.

Two days later the swelling was not so tense, discoloration was noticed to have spread down the calf; the foot was oedematous and there was slight impairment of sensation over the distribution of peroneal nerves.

For the next fortnight the size of swelling varied according to the attacks of tearing pain in thigh experienced about once every four days. Each attack was followed immediately by increase in size of mass and after an interval by discoloration.

The mass did not pulsate; the femoral artery could be felt pulsating anteriorly over the swelling. An X-ray examination of the femur revealed no bony change.

The patient's general condition deteriorated, the pulse rate remained over 110 and often increased up to 160 after an attack of pain. The temperature varied between

37.2° C. and 38.4° C. (99° F. and 101° F.). The leucocyte count remained under 12,000 per cubic millimetre.

One month after admission the edge of the spleen became palpable and the patient complained of painful spots in the pads of both index fingers. Clubbing of all fingers was now evident. Microscopic examination of the urine revealed the presence of a few red blood cells. The cardiac murmurs did not alter. Blood culture on two occasions yielded no growth.

During the next fortnight no alteration occurred in thigh but the pulse continued to be rapid, the temperature remained the same and the spleen and liver became distinctly palpable. The patient became weaker, more dyspnoeic and died on April 9, 1923.

Before investigations had been completed, treatment was mainly antiseptic. When the nature of the endocarditis was recognized, calcium lactate was given at four hourly intervals in doses of one gramme (fifteen grains).

*Post mortem* examination showed the following changes:

The heart was large with marked hypertrophy of left ventricle, the muscle was good. The aortic valves were ulcerated, one cusp being perforated and covered with vegetations which were moderately soft and crumbly and were easily detached. The ventricular wall was unaffected, but on the mitral valve and on *chorda tendinæ* were many more soft vegetations resembling the nodules on roots of leguminous plants. The right side of the heart was unaffected. From the valves removed *post mortem* an attempt was made to isolate the causal organism. It was unsuccessful. The aorta was clean. The liver showed a nutmeg-like appearance. The spleen weighed thirty grammes (seventeen ounces), was soft and contained one area which resembled an infarct. The lungs were normal. The kidneys were slightly enlarged and the soft vessels were very evident.

In the dorso-medial aspect of left thigh was a collection of a litre of blood clot of varying age, some soft, some firm and laminated, extending from a rupture of one side of the wall of the deep femoral artery. This was easily demonstrated. The blood clot had tracked down the thigh through the popliteal space to the calf. No pus was present.

Examination of other large vessels failed to show anything abnormal. The mass therefore was regarded as a false aneurysm resulting from an artery whose wall had been damaged by an embolus from the aortic or mitral vegetation resulting from infective endocarditis.

## Reviews.

### ENDOCRINE THERAPEUTICS.

THE endeavour to popularize the use of extracts and other products of the glands of internal secretion has produced a number of books of the popular summary variety; T. B. Scott's book on *Endocrine Therapeutics* is on these lines. It is built up largely by extracts from the works of physiologists and by the addition of a good deal of philosophy of a sort, the author has covered 116 pages. This work does not advance medical knowledge from the physiological standpoint and apart from the few well known common uses of such substances as thyroid extract, "Pituitrin" and adrenalin there is no apparent endeavour to advance clinical knowledge on any scientific basis. The author enumerates the conditions in which he considers various glandular extracts may be beneficial, drawing mainly on his own experience for authority. There are some suggestions made which might justify further investigation, but there appears to be little basis for the assumptions made by the author that such and such a symptom is due to the lack or excess of such and such a secretion. For instance: "The unnatural falling of the hair in middle-aged women . . . unexplained rheumatic pains, such as fibrositis or wandering pains in the back with a strong sense of chilliness are often due to thyroid deficiency." The book is a pocket edition of one hundred and sixteen pages, with nice clear print.

<sup>1</sup> "Endocrine Therapeutics: Practical Suggestions," by Thomas Bodley Scott: 1922. London: H. K. Lewis & Company, Limited; Crown 8vo., pp. 118. Price: 6s. net.



## The Medical Journal of Australia

SATURDAY, JUNE 30, 1923.

### Compulsory Treatment.

A PROBLEM of importance has occupied the attention of the members of the Western Australian Branch of the British Medical Association during the past three months. At the annual meeting of the Branch, held on March 18, 1923, a letter was read from the Western Australian Odontological Society in regard to the establishment of dental clinics for the treatment of dental defects in school children. Dr. H. M. Jull urged the meeting to ask the Government to provide a dental clinic with a whole-time salaried dentist and the necessary number of part-time assistants. In the course of a short debate the opinion was expressed that gratuitous treatment should be given only to the children of indigent parents. Subsequently Dr. J. Dale, O.B.E., opposed this differentiation on national grounds. From the manner in which the discussion was conducted, it seemed as if the interests of the medical profession and those of the public were in conflict and that no formula could be found that would safeguard the health of the community and at the same time satisfy the medical profession. It is true that in this particular proposal it is the dental rather than the medical profession that is directly concerned, but the fundamental problem involved will be found to concern the medical profession even more profoundly than the dental profession. Moreover, the activities of the two professions meet on the common ground of hygiene. Both professions have considered the principles underlying such proposals as the one mentioned above in the course of the past decade and in general it may be said that it has been impossible to reconcile the views of the major part, namely, the medical and dental practitioners and those of the smaller fraction, the departmental officers.

Many years ago when preventive medicine was in its infancy, it was agreed that it was a function of

the public health authority to control the physical and mental condition of school children in order that measures might be adopted to diminish ill-health and to improve the efficiency of the community as a whole. No one questions the necessity of medical and dental inspection of school children on national grounds. It is long since Sir George Newman pointed out that the health, resistance and earning power of the community depended to a large extent on the removal of the common defects to which the medical inspectors gave their chief attention. Defects of vision, defects of hearing, defects in the masticatory apparatus, defects in nutrition, defects in cleanliness and defects in posture are found in association with inability on the part of the child to learn; the same defects lay the foundation for the crippling and fatal diseases that handicap the nation in its competitive struggle for supremacy. From the first it was made evident that the medical inspection of school children was needed not for statistical purposes, but in order that remedial measures might be introduced for the benefit of the whole community. The Department of Education in England in the early years of the present century asked the medical profession to collaborate with it in two directions. In the first place assistance was required from medical practitioners in the work of inspection. This assistance was readily and freely given. In the second place it was pointed out, that if the practising part of the profession would undertake the treatment of individual children found at the examination to be defective, no steps would be taken to provide treatment as a departmental activity. The term "measures of amelioration" was employed for the wide application of remedial operations, to include that form of treatment that is best provided in special clinics. The general principle was accepted that the interests of the nation demanded the detection of defects in school children and the application of such remedial measures as would reduce the baneful effects of these faulty conditions to a minimum. Years have gone by since the education authority and the medical profession discussed these matters and removed the main difficulties. In the interval experience has accumulated and it is possible to estimate the result of the expedients

adopted to achieve the desired objective. Parents are notified that their children are suffering from defects that demand treatment. The system of following up has been introduced. The nurse uses persuasion with recalcitrant parents.

In the United Kingdom compulsion has been avoided, although the medical inspector, the nurse and the teacher often employ argument that is not far removed from command. Be this as it may, it has been found that where good organization exists, where the persons concerned have ability to persuade and where energy is displayed, the majority of the parents do not resist for long. It is difficult to foretell the effect of compulsion if applied to citizens of the British Empire. In the presence of a demonstrable and immediate danger, compulsion has to be applied. An example of this may be cited in an epidemic of plague, when infected persons are removed without their consent to isolation. Compulsory treatment has recently been prescribed for venereal diseases. It may be that it would be in the public interest to compel parents to submit their children to treatment of the scheduled defects discovered at the medical inspection at schools. Whether public opinion is prepared at this stage to accept this proposal is another matter. But it must be evident that parents who can afford to have this treatment carried out in private, should be persuaded to adopt this course. There should be no greater difficulty to induce a parent to take the child to the family doctor or dentist than to allow the nurse to take it to the clinic. When the parent cannot afford to pay for the necessary treatment, the clinic should be utilized. There would still be the necessity to provide for the obstinate parent who can afford to pay, but resists the importunities of the medical inspector and the nurse. If argument can result in permission to take the child to the clinic, the authority should reserve to itself the right to recover the cost of treatment. The aim of those who recognize the supreme importance of the universal application of measures of amelioration in the interests of the nation, will be achieved if the public can be educated to understand the problem. Patience and pertinacity must be rewarded.

## Current Comment.

### THE SKIAGRAPHIC EVIDENCE OF SILICOSIS.

IN the year 1916 public attention was attracted in South Africa to the heavy mortality among the miners in the Witwatersrand area. It had previously been shown by Collis and others that the old-time conception of the nature of miners' phthisis was untenable and that pulmonary fibrosis and pulmonary tuberculosis as causes of death among miners and workers in dusty trades depended on the inhalation of insoluble silica in particulate form. This question was the subject of an exhaustive investigation by a committee in South Africa, called the Miners' Phthisis Prevention Committee. A valuable report was issued in 1916. Previously a Royal Commission had sat in Perth and its report, published in 1911, had disclosed many facts of importance. The South African Committee realized that it had but begun the work and that if preventive measures were to be established and the incidence and mortality of silicosis were to be reduced, a permanent organization would have to be established. Consequently the Miners' Phthisis Medical Bureau was instituted in 1916 and it has been working since with signal success at its task of reducing the baneful effects of dust on those working underground in the Rand. The chief prophylactic measure adopted was the elimination of the man physically unfit for this class of work.

It will be remembered that a similar movement was initiated in Broken Hill in 1918 and that a very valuable report was issued in 1921 by the Technical Commission of Inquiry on the problem as it presented itself in Broken Hill. In the course of the investigations, both in South Africa and at Broken Hill, it was found that ordinary physical examination was insufficient to differentiate normal lungs from lungs mildly affected with pneumoconiosis. Moreover, it was recognized that certain individuals were naturally unfitted for underground work. At an early stage it had been discovered in South Africa that silicosis could be detected by skiagraphic means before other evidence was available. The Technical Commission made adequate provision for this aspect of the subject and included in its report a series of beautifully prepared skiagrams which demonstrate the truth of this assertion in a very striking manner. It was stated in the report that, as far as could be judged, the standards in the examination of the X-ray plates were similar to those adopted in South Africa.

Dr. W. Steuart, the Medical Radiographer to the Miners' Phthisis Medical Bureau, has recently published an interesting article on the methods adopted on the Rand and on the general scheme of the work.<sup>1</sup> It appears that every man has to submit to an examination before he is accepted for underground work in the mines. In the second place, every worker is re-examined every six months. Lastly, an examination is carried out when a claim for com-

<sup>1</sup> *Archives of Radiology and Electrotherapy*, February, 1923.

compensation is made or when the individual may be the subject of an inquiry. The skiagraphic examination is undertaken without reference to the clinical examination. Reports from both departments are laid before the Bureau, which decides whether an applicant may become an underground worker, whether a miner may continue to work underground and, lastly, what extent and degree of permanence of disability is present in a claimant for compensation.

Each man has a slip bearing his special number. He is photographed in the ordinary way and a photographic reproduction of the number on the slip is embodied on this identification picture. Then the skiagram is prepared and on the heart shadow an adjustable stencil plate is imposed, so that the skiagram carries an indelible record of the identity of the person. The skiagrams are taken under standard conditions. In order to overcome the varying factors, namely, the thickness of the chest and the hardness of the tubes, regular adjustments are made. The internal resistance of the tube is adapted as far as possible to standard requirements and the length of exposure is varied in accordance with the antero-posterior diameter of the chest.

In the initial examination particular attention is paid to the shadows of the heart and the aorta and to the presence of adventitious shadows. It has been found that the outline of the heart shadow in apparent health varies considerably from what is regarded as normal. At times the heart shadow is vertical. It is held that this is sufficient to justify the Bureau in rejecting the man for underground work. It is assumed that a vertical heart shadow is a manifestation of cardiac atrophy and that since the shrunken organ can no longer fill the pyramidal sac, the sides of the sac tend to be displaced by centripetal force in an inward direction. Whether this explanation be correct or not, experience has taught the medical officers that men whose hearts yield such shadows, are more disposed to silicosis than normal men.

In connexion with the degree of fibrosis found in the lungs of normal individuals some interesting information is given. All authorities are agreed that the lungs of a young, healthy adult do not reveal any signs of fibrosis. In the report of the Technical Commission at Broken Hill a fine skiagram of a normal chest as seen in middle life is reproduced. The description is given as follows: "The hilum shadow extends further into the pulmonary fields than in the young adult, the lung shadows are not as clear and the heart shadow becomes more triangular in shape." The legend attached to a skiagram of a typically normal adult thorax in Dr. Steuart's article is as follows: "The bronchial tree is definitely outlined and there is evidence of some degree of adventitious, though 'normal' fibrosis in the root areas." The picture shows much more than an extended hilum shadow. Still more extensive evidence of fibrosis is presented in two skiagrams labelled: "Rather More Fibrosis Than Usual." In one the bronchial shadows are very definite and there is a coarse reticulation between them. Dr.

Steuart has found that the "typically normal" thorax is rare. The majority of men applying for work underground yield skiagrams that are classed under the rubric "rather more fibrosis than normal." Five or six men out of a total of nearly twenty thousand were found to have a condition indistinguishable from that of silicosis. In each instance it was found that they had been exposed to a greater or less extent to siliceous dust.

The periodical examination of underground workers naturally presented a greater variety of interesting problems. The skiagraphic evidence of silicosis is frequently seen. The worker is not required to give up his work unless a tuberculous infection be superimposed. Syphilitic fibrosis is said to be unlike silicosis in its skiagraphic appearances. It is more difficult to distinguish syphilitic fibrosis from tuberculous disease. It appears that the stages of silicosis have been defined by law in South Africa and in consequence difficulties often arise as a result of the impossibility of reconciling the legal definition with the clinical, radiographic or pathological. Dr. Steuart has found it necessary to set up standards or stages as recognized by the skiagraphic signs. These findings have been coordinated with the pathological evidence. The Broken Hill workers also recognized definite stages. The first stage, as described by Dr. Steuart, comprises the accentuation of the hilus and larger bronchial shadows. The increasing fibrosis brings out the shadow of the smaller tubes. In time a linear network of shadows appears throughout both lungs. Dr. Steuart holds that these appearances are not pathognomonic of silicosis and that a definite diagnosis cannot be made until the second stage has been reached. In the Broken Hill report the first stage appears to correspond to that of Dr. Steuart, but it is regarded as a definite sign of silicosis.

The second stage is characterized by the apparent segmentation of the linear shadows which appear as numerous, small, discrete miliary nodules. The change from reticulation to nodulation is said to be uniform as a rule. Here again there is general agreement between the workers in South Africa and those of the Technical Commission, but the latter recognize in this stage some persistence of the linear markings, side by side with the nodular formation. Moreover, the Technical Commission distinguishes between the second stage, in which the nodules are dense, but relatively small and not very discrete, and the advanced stage, in which the nodules are extremely dense, large in area and extremely discrete. The distinction, however, is but one of degree and the two forms obviously merge into one another. In the next place, emphasis is placed on the recognition of the first signs of a tuberculous involvement of the fibrotic organ. The uniformly mottled shadow becomes clouded. This change appears as a rule on one side only at first. The skiagram then gives the impression of unusual asymmetry. The heart shadow tends then to become vertical. Dr. Steuart leaves his skiagrams to illustrate the characteristic appearances of the tuberculous complication. His pictures are good,



but not as clear and as instructive as those of the Technical Commission. Consequently, it is not easy to determine whether the same criteria are employed in the two places. The skiagraphic evidence of consolidation, contrasting as it does with the nodular formation of pure silicosis, presented by the Technical Commission of Inquiry in their skiagrams, is so convincing that skill in interpretation is scarcely required to recognize the process as a tuberculous one. The same cannot be said of the South African pictures. It appears, however, that there is little divergence in interpretation of the early signs by the two sets of workers. Dr. Steuart does not include in the paper under consideration the incidence of tuberculosis among the Rand miners. Perhaps this subject will be dealt with at a subsequent date.

#### THE PHYSIOLOGICAL SIGNIFICANCE OF THE ACCESSORY FOOD FACTORS.

THE study of the accessory food factors has been followed to a large extent on lines which may be described as indirect and inferential. The nature of these elusive substances, if, indeed, the accessory food factors are chemical entities, has not been determined. Certain qualities have been discovered by the appearance of visible changes in the animal body when the diet provided is handled in such a manner that the alleged substances are either removed or destroyed. The sources of these substances is inferred. Even the visible signs of the alleged deficiency conditions cannot be regarded as strictly characteristic. It is in consequence eminently desirable to seek for some specific physiological significance of the individual factors, in order that the avenues of attack in this important and difficult subject may be extended. Last year Cramer, Drew and Mottram made the promising announcement that the number of blood platelets became considerably diminished in rats when fed on diets deficient in vitamin A. They recorded a fall from what they held to be the normal platelet content for rats of 851,000 per cubic millimetre to 378,000. It has to be remembered that of all the blood elements the platelets have proved themselves to be subject to the greatest variation in number. There are technical difficulties in the preparation of specimens which without doubt result in the extraordinary lack of unanimity concerning the normal platelet content of the blood. But technical difficulties and physiological lability need not deter investigators from utilizing the platelet count as an index of a vitamin deficiency. Drs. S. Phillips Bedson and S. S. Zilva recognized the importance of such a standard and consequently repeated the experiments.<sup>1</sup> Unfortunately they have demonstrated that the reduction in the number of platelets is too small to be used in the manner suggested. They used young rats of one age, since they were anxious to eliminate avoidable error, where possible. Their counts with

normal animals averaged 1,208,857 platelets per cubic millimetre, with a range of from 1,585,000 to 1,077,000. It will be noted that this range represents a variation of 21% either way. The ratio of the platelets to the red blood corpuscles varied from 5.7 : 1 to 7.5 : 1. The counts made with the blood of rats fed on a diet deficient in vitamin A and manifesting signs, such as cessation of growth and keratomalacia, yielded values ranging from 818,000 to 1,440,000, with an average of 1,075,888 per cubic millimetre. Of the nine rats, five yielded values that did not differ from those found in normal rats. In the next place the platelet count was followed in rats manifesting signs of vitamin A deficiency. The platelet content diminished in all the six rats subjected to this control. The decrease amounted to 3.3% and 5.5% in two rats, figures that the authors admit are well within the range of experimental error. The remaining four observations revealed decreases of 17.8%, 17.9%, 20% and 21.3%. They regard these results as slight but definite evidence of a diminution in the number of blood platelets. It must, however, be urged that the experimental error is probably nearer 15% than 5.6%, the error observed in three experiments. Finally they fed two rats with definite signs of deficiency with cod liver oil and obtained good increase in growth. The platelet content of the blood increased in one and diminished in the other. It thus appears that the influence on platelet formation by vitamin A is not substantiated.

#### Medico-Legal.

##### G. S. THOMPSON v. THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE following reserved judgement was delivered on May 7, 1923, by the Chief Justice, Sir William Cullen, in the appeal by the New South Wales Branch of the British Medical Association against the previous verdict in the case of Dr. G. S. Thompson *versus* the New South Wales Branch of the British Medical Association. Mr. Justice Gordon and Mr. Justice Ralston concurred. Dr. Thompson has been granted leave to appeal to the Privy Council to set aside this verdict.

SHORTLY stated in the first count of the declaration in this case the plaintiff alleges that the defendant Association maliciously and unjustifiably conspired and combined with certain of its members whose names were unknown to him to do certain things. These were (1) to pass a resolution for his expulsion, (2) to expel him, (3) to induce, persuade and procure medical practitioners members of the Association to refuse to meet him in consultation or to accord him professional recognition in any other form, (4) to intimidate, coerce and unduly influence such practitioners into refusing to meet him in consultation or to accord him professional re-

<sup>1</sup> The British Journal of Experimental Pathology, February, 1923.



cognition in any other form, and (5) to seriously prejudice the plaintiff and injure his practice. The count goes on to allege that each of these objects was carried out in pursuance of such conspiracy and combination, as a consequence of which the plaintiff suffered damage.

The second count avers as a fact that the plaintiff was expelled from the Association (without alleging any unlawfulness or wrong-doing in the manner whereby this was brought about), and proceeds to allege that the defendants "with undue influence wrongfully, maliciously and unjustifiably induced and procured large numbers of medical practitioners practising in this State, members of the Association (including certain names specially mentioned) to refuse to meet the plaintiff in consultation or to accord him professional recognition in any other form," whereby he suffered damage.

The remaining counts are based on defamation.

With regard to the intimidation, coercion and undue influence alleged to have been practised by the defendant Association particulars were served upon the defendants. Under the first count these were (1) that the defendants "procured and induced certain other doctors practising in New South Wales to refuse to meet the plaintiff in consultation or to accord him professional recognition in any shape by the threat contained in the Intra-professional Restriction Regulations of the defendants that if they did so they would subject themselves to the penalties laid down in the said Regulations," (2) "that the defendants threatened all doctors who met the plaintiff in consultation or accorded him professional recognition in any other form with expulsion or some other punishment if they acted in breach of the aforesaid Regulation."

It is proper here to mention that no evidence was adduced at the trial of the actual making of any such last mentioned threats, so that the case under the first count, so far as it claims damages for the alleged intimidation, coercion and undue influence rests solely upon what is spoken of in No. 1 of the particulars as "the threat contained in the Intra-professional Restriction Regulations of the defendants."

In the particulars delivered under the second count it is set out that "the unlawful threats, intimidation and coercion and undue influence charged are the threats, intimidation and coercion and undue influence exercised by the Intra-professional Restriction Regulations of the defendants."

I propose first to address myself to a common feature in counts 1 and 2 (which for brevity's sake I shall refer to as the allegation of "intimidation"), though in count 1 this is used only to describe the way in which the alleged conspiracy brought about damage to the plaintiff, whereas in count 2 it is in itself made the very ground of action, no previous conspiracy or other tort being charged in that count.

The "Intra-professional Restriction Regulations" here referred to include certain rules for the professional conduct of members of the defendant As-

sociation which, so far as is necessary to be stated here, are as follows:

- (1) Where any member shall have been expelled, he shall not be met in consultation or accorded professional recognition in any other form by any member until it shall have been otherwise decided by the Council.
- (2) Where any medical practitioner shall have been declared by the Council to have been guilty of conduct detrimental to the honour and interests of the profession, and calculated to bring the profession into disrepute, no member shall consult with or extend professional recognition in any other form to such practitioner until it shall have been otherwise decided by the Council."

The prohibition in Rule 2 is qualified by further Rules 5 and 6 which permit professional intercourse to such limited extent as may be absolutely necessary on the ground of humanity or public necessity, or to such limited extent as may be necessary for the due performance by a member of his official duty as an officer in the naval or military or civil service of the Commonwealth or the public service of the State or as the medical officer of a Government department or a medical officer of the Government railways and tramways.

This is printed among other "Regulations" in a handbook issued by the defendant Association which also contains its Memorandum and Articles of Association, it being an Association "not for profit" registered under the appropriate sections of the Companies Act. The evidence does not disclose the date on which, or the manner by which, this Regulation came to be adopted, except that it was in existence before the plaintiff became a member of the defendant Association, but its promulgation by the Association would afford sufficient *prima facie* evidence (supposing that there had been any dispute about the matter), that the course of conduct which it lays down was regarded as obligatory upon members.

Following upon certain communications which passed between the plaintiff and the Secretary of the Association, a resolution was passed at a duly convened meeting of the Council, of which the plaintiff had due notice and at which he attended and was heard on his own behalf. The resolution was in these terms:

That the members of the Council of the New South Wales Branch of the British Medical Association here assembled resolve that Dr. George Stanley Thompson has been guilty of conduct derogatory to the honour and integrity of the medical profession in this State and calculated to bring the same into public contempt, and injurious to the welfare and interest of this Branch, and that accordingly he be expelled from this Branch of the Association."

Shortly stated, the charges made against the plaintiff and duly notified in the circular convening that meeting consisted in (1) certain statements in connexion with the detention of a mental patient. These were contained in a letter from the plaintiff to the Premier of the State and were charged to have been "made without foundation and reflecting on certain responsible medical men in derogation of the honour and integrity of the medical profession in this State and calculated to bring the same into public contempt." (2) Certain statements of a like nature contained in a letter from the plaintiff to the *Evening News* newspaper and published in that paper. (3) Certain statements also of a like nature attributed to the plaintiff in a newspaper report of a deputation to the Acting Premier on the subject of the Lunacy Act and its administration. (4) The publication by the plaintiff in certain public newspapers of correspondence which had passed between the Association and the plaintiff relating to the matters aforesaid. This, it was complained, was in breach of a regulation adopted by the Association at a General Meeting in March, 1920, and prior to the happening of any of the matters with which this action is concerned. That Regulation prohibited the publication without the express authority of the Council in writing of communications between members and the Association or the Council or a Committee thereof, with a proviso that this should not apply to any such publication in *The British Medical Journal*, *The Medical Journal of Australia* or other the official organ of the Association.

#### Under Article 34 of the Association:

Any member may be expelled from the Association by a resolution of the Council if carried by three-fourths of the members present subject to confirmation by a General Meeting and he shall thereupon cease to be a member. Twenty-eight days' notice of the intention to propose such resolution shall be given to any member affected thereby."

At an Extraordinary General Meeting of members of the Association held after twenty-eight days' notice to the plaintiff and the other members that a resolution would be submitted confirmatory of the Council's resolution already mentioned, and at which meeting also the plaintiff attended and was heard, a confirmatory resolution was passed by a majority of seventy-six to twenty-three.

Returning now to the issue of "intimidation," which as I have pointed out is common to the first and second counts, it is to be observed that in neither count has the act of expulsion been challenged as unlawful or *ultra vires*. The whole case both in the Court below and before us was conducted on the basis that it was entirely within the competence of the Association to expel, and that expulsion was actually effected. If the complaint in this action had been that the purported expulsion was outside the scope of Article 34, or that it was vitiated by non-compliance with some legal requirement such as want of notice or the like, or

that there was some denial of natural justice in the investigation of charges made, an issue would have been raised different from that actually presented on the pleadings (See *DAWKINS v. ANTROBUS*, 17 *Ch. D.* 626). The satisfaction of the burden of proof resting on the plaintiff on such an issue would have established that the purported expulsion was nugatory and that the plaintiff still retained his rights as a member. The result would be that his right to recover damages for the alleged expulsion would be negatived; *WOOD v. WOOD* (L.R. 9 Ex. 190), *RUSSELL v. RUSSELL* (14 *Ch. D.* 471), whatever rights he might have to proceed in Equity for a declaration of his rights and an injunction against exclusion from those rights; *DAWKINS v. ANTROBUS*, *LABOUCHERE v. EARL OF WHARFCLIFFE* (13 *Ch. D.* 346). Although any difficulty of this sort is avoided by the actual form of the pleadings in the present case, the implicit admissions in those pleadings that the expulsion was lawful exposes the plaintiff to a fresh difficulty. Putting aside for the moment the question of conspiracy, once it is admitted that the expulsion was lawfully effected it is immaterial whether or not the defendant Association intended that damaging consequences should result therefrom to the plaintiff.

*Scrutton, L. J.*, in *WARE AND DE FREVILLE LIMITED v. MOTOR TRADE ASSOCIATION* (1921. 3 *K.B.* at page 70) gives various illustrations of the principle that acts done in the exercise of his own rights do not ordinarily expose the doer to an action merely because they are done with the intention of causing damage to another, *e.g.*, stopping underground water from flowing into the land of another with the intention of injuring.

In the present case, once it is conceded that the expulsion was lawfully effected so that the plaintiff's claim for damages is made to rest entirely on the alleged intimidation, he must in my opinion fail under the second count for lack of evidence. For it seems to me idle to contend that the pre-existing "Intra-professional Restriction Regulation" could be relied upon as evidence of the alleged tort by intimidation practised against the plaintiff. This Regulation was not directed at any particular individual; it existed long before the plaintiff became a member of the Association, and he had received from the Secretary a copy of the handbook containing it before he became a member.

As this was the sole ground relied on, it is in my opinion sufficient to vitiate the verdict under that count, there having been separate damages awarded under each count. The same remark applies to the claim for damages under the first count based upon alleged intimidation. This pre-existing Regulation is equally worthless as evidence of the conspiracy which forms the gist of the first count. From its history it cannot be evidence either of a conspiracy to injure the plaintiff or of an act done in the carrying out of such a conspiracy. No doubt the effect which its existence would produce upon the reputation and practice of an expelled member can be taken to have been present to the minds of all members. It may well be that the liability to such a

detriment might have been used to aggravate any damages that might have been recoverable if the alleged conspiracy were otherwise proved. But this would not be because the Regulation itself amounted to a threat or to intimidation perpetrated by the defendants as alleged in the count and explained by the particulars.

It is proper then to consider whether there was any evidence at all under count 1 of an actionable conspiracy. Counsel for the plaintiff relied strongly on a passage in the judgment of Atkin, L. J. in *Ware and De Freville Limited* at page 90. "It appears to me to be beyond dispute that the effect of the two decisions in *ALLEN V. FLOOD* and *QUINN V. LEATHEM* is this: that on the one hand a lawful act done by one does not become unlawful if done with an intent to injure, whereas an otherwise lawful act done by two or more in combination does become unlawful if done by the two or more in combination with intent to injure another."

But applying this, where is the evidence here that the defendant Association combined with any individual or individuals to injure the plaintiff? Supposing for argument's sake, as Counsel contended, that members of the Ethics Committee who originally reported on the matter to the Council, or that members of the Council who passed the resolution for expulsion, or members of the Association who voted at the General Meeting, or some of these individuals, were actuated by hostility towards the plaintiff, it would still be necessary for him to show that the Association itself, the sole party here sued, was acting in conspiracy with those individuals. The class of evidence relied on for that purpose can be gathered from the particulars setting out the "acts of conspiracy" charged, which extend over the whole of the ground covered at the trial. These particulars deal chiefly with the manner in which the charges against the plaintiff were brought before the Council and the General Meeting respectively, and the manner in which their proceedings were conducted. So far as members of the Council are concerned their acts in meeting assembled cannot be attributed to the Association as acts of conspiracy by the Association, for neither individually nor conjointly were they its agents. Nor did their resolution when carried become an act of the Association because under Article 4 it bound no one until confirmed by a General Meeting. Its adoption by the General Meeting and the notification of it to members by the Secretary were no doubt acts for which the Association can be made responsible. But, being admittedly within its legal competence, the mere doing of them cannot be given any sinister construction on the issue of conspiracy to do them.

It was urged that the manner in which they were done *prima facie* indicates that they were done *mala fide* in pursuance of a prearranged scheme. But to say that there was something legally objectionable in the manner of doing them is the same thing as saying that the expulsion itself was invalid, which is contrary to the admissions in the pleadings.

Passing to the other particulars it will be seen that No. 1 describes the charges under investiga-

tion as "frivolous and wanting in *bona fides*." If in truth they were merely frivolous that would in itself suggest *mala fides*. But the main gravity of these charges lay in the fact that most serious imputations had been cast by the plaintiff publicly upon the conduct of members of the medical profession in regard to their treatment of a mental patient founded upon statements of that patient herself, conduct of a kind which, if proved, would amply warrant their own expulsion from the Association and their condemnation by every right-thinking man. Allowing to the full the plaintiff's explanation that he had been misrepresented in the press in regard to some of the statements made on the occasion of the deputation to the Premier, and that before publishing the correspondence between himself and the Secretary of the Association he had been seriously provoked by an article in the *Medical Gazette* to which I shall refer later, there was evidence before the jury of such a degree of recklessness on his part in the making of these imputations, and of evasiveness in assuming responsibility for them, that no reasonable man could come to the conclusion that the plaintiff was being harassed over matters of small importance.

The fact that some of the matters that the plaintiff was called upon to answer were based upon statements of his that took a wider range in connexion with the lunacy laws of the State and their administration, and that part of the complaint made against him consisted in the breach of a regulation restricting the publication of correspondence in the ordinary press, may have led the jury to suspect that the vote for expulsion was prompted by professional sensitiveness, to the ignoring of the public utility of an open criticism of the Act and its administration. But suspicion is not evidence. Nor can I see anything either in the manner of summoning the General Meeting, or in the manner in which it was conducted, or in the correspondence, fit to be submitted to the jury as evidence of any conspiracy to which the Association was a party.

The article in the *Medical Gazette* already mentioned was expressed in most condemnatory terms. But I see no evidence on which it could be found by the jury that the Association was any party to the writing or publication of this article.

The *Medical Gazette* was not shown by any evidence to be a journal owned or conducted by the Association. There was direct evidence to the contrary, though the paper was recognised as an "official organ," whose columns were open to the Association or its members for the expression of their views on subjects of interest to the profession. As these were the sole grounds on which the verdict on the first count was sought to be supported this verdict in my opinion must also be set aside.

Of the remaining counts, which are for defamation, the third charges libel, based, as is seen from the particulars and the evidence, upon the notice of November 5th, 1921, sent by the Secretary to the members of the Association of the Extraordinary General Meeting to be held on the 18th of that month. By this it was notified that the resolution



passed by the Council on the 27th of September would be submitted for confirmation at the General Meeting. The notice sets out the terms of that resolution in its exact words, as well as the terms of the confirmatory motion to be proposed at the General Meeting, which was simply to the effect that the resolution of the Council "relative to the conduct of Dr. G. S. Thompson be and the same is hereby confirmed." To this notice was subjoined a copy of Article 34 dealing with expulsion.

The Council's resolution so set out was in these terms:

That the members of the Council of the New South Wales Branch of the British Medical Association here assembled resolve that Dr. G. S. Thompson has been guilty of conduct derogatory to the honour and integrity of the medical profession of this State, and calculated to bring the same into public contempt and injurious to the welfare and interests of this Branch, and accordingly he be expelled from this Branch of the Association.

The fourth count, also laid in libel, is based on the notice sent by the Secretary to the members of the Association, containing the terms of the resolution passed at the General Meeting. This notice announces the calling of an Extraordinary General Meeting to consider business in no way connected with this case, and of an ordinary meeting, also for business in no way connected with this case. But there is subjoined under the head "Memorandum to Members" a statement that the resolution of the Council of the 27th of September had been confirmed at the Extraordinary General Meeting held on the 18th November setting out the actual terms of that resolution. The entire notice was headed "Private and Confidential for the use of the members of the British Medical Association exclusively." Though the particulars speak of this as having been sent "as the plaintiff believes, also to branches of the British Medical Association in Queensland, South Australia, Victoria, Tasmania, and to the Parent Association in England," there was no evidence of this and it would appear there was no foundation for such a belief.

The fifth count is for verbal defamation, based on the announcement made to the General Meeting by the Chairman of the carrying of the resolution expelling the plaintiff. On each of these defamation counts the learned Judge of trial ruled, and it is admitted that he correctly ruled, that the occasion was privileged, and left the issue of express malice to the jury.

Speaking generally with reference to these three defamation counts it is clear that a considerable part of the material upon which the jury were asked to judge on the question of malice consisted of the same facts as those upon which they were asked to judge on the questions of conspiracy and intimidation. If on those facts they concluded that the defendant Association was engaged in a conspiracy to injure the plaintiff, or that it practised intimidation upon its members with the same ob-

ject, there could be no stronger evidence of direct malice. But if I am right in holding that there was no evidence fit to be left to the jury on the questions of conspiracy and intimidation, it follows that the verdict on the defamation counts cannot stand, even if there were other facts to sustain those counts, in which case there would have to be a new trial upon them. It becomes necessary then to inquire what facts there were, if any, that could have gone to the jury on the question of malice, supposing that the issues of conspiracy and intimidation had been withdrawn from them. That a corporation can be held responsible for the actual malice of a servant acting within the scope of his employment has not been questioned in this case, and sufficiently appears from the authorities mentioned by McCardie, J., in *PRATT V. BRITISH MEDICAL ASSOCIATION* (1919, 1, K.B. pp. 279-281). Clearly neither the members of the Council, nor the members assembled in General Meeting, were agents or servants of the Association. But the Secretary, whose duty it was to inform and who did inform members of the resolutions carried by the Council and the General Meeting respectively would be such a servant or agent. But there is no evidence whatever that he was actuated by malice in making those communications.

The Chairman who presided at the General Meeting was in this case the President of the Association, and it may be taken for the present purpose that his official acts as such President were acts for which the Association can be held responsible. His announcement of the results of the voting which was taken on division was, as appears from the evidence, restricted to the words "I declare the resolution carried by" mentioning the number, which were seventy-six for and twenty-three against.

For this "defamatory publication" the jury awarded £350 damages, an estimate which it is, somewhat difficult to understand. The spokesman of the meeting—the minority as well as the majority—formally states, as his duty was, the numbers recorded at a vote in which they had all just taken part. How could this have altered so seriously for the worse the reputation of the plaintiff, who was the subject of that vote, in the minds of any one of them in whichever way he had voted? But to go deeper, what is there in the evidence of his conduct of the proceedings, including that announcement, capable of being construed into malice by any reasonable mind? It was argued that this and that detail of the proceedings was unfair to the plaintiff. But it is not for this Court to prescribe the details of procedure at General Meetings of the Association. What we are concerned with at this point is to see whether there was evidence on which some improper motive could be attributed to the Chairman and I see none whatever.

I am driven to the conclusion then on all counts that there was no evidence proper for submission to the jury, and that this verdict must therefore be set aside and a verdict entered for the defendant Association.



## British Medical Association News.

### MEDICO-POLITICAL.

A MEETING OF THE WESTERN AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the Perth Hospital on May 16, 1923, Dr. D. M. McWHAE, C.M.G., C.B.E., the President, in the chair.

#### Treatment of Accidental Injuries.

MR. F. A. HADLEY read a paper entitled "The Treatment of Accidental Injuries" (see page 715).

DR. R. C. EVERITT ATKINSON said that an advisory board would be necessary to carry out Dr. Hadley's proposals. He agreed with Dr. Hadley as to the desirability of supplying country centres with a suitable equipment of splints. In the past great difficulty had been encountered in getting sufficient information in regard to measurements and so on on receipt of demands for splints from practitioners in the country. He touched on the question of the establishment of X-ray plants in some of the country towns and stated that where possible this was being done. In some instances private practitioners owning X-ray outfits were doing work for which they were paid by the Department of Public Health.

DR. A. JUETT enlarged upon the importance of an adequate supply of suitable splints in all centres.

DR. W. TRETHOWAN mentioned the obvious loss to the country from the lack of facilities for suitable after treatment. With the *Workers' Compensation Act* in operation the insurance companies should be sufficiently interested to subsidize orthopaedic centres.

DR. L. J. ROBERTSON thought that the friendly societies might also be sufficiently interested to render financial support to such a scheme.

DR. EVERITT ATKINSON proposed the formation of a sub-committee to approach the insurance companies and the Minister of Public Health. The motion was seconded by Dr. F. L. Gill.

DR. D. M. McWHAE referred to the difficulties which would arise in training a staff for an efficient orthopaedic department. He spoke of the time spent on training officers and men in the Australian Imperial Force.

DR. ROBERTSON said that it would be useful if a portable X-ray plant were sent out to country districts.

DR. ATKINSON'S motion was carried and the following were appointed members of the sub-committee: Mr. F. A. Hadley, Drs. W. Trethowan, R. C. E. Atkinson, F. L. Gill, A. Juett and J. V. Arkle.

A MEETING OF THE "SOUTH-WESTERN DIVISION" OF THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at Warrnambool on May 26, 1923, Dr. H. I. HOLMES in the chair.

#### Staffing of Public Hospitals.

THE President announced that the question of staffing of the hospital at Hamilton had been considered at a meeting of medical practitioners of Hamilton and the adjoining towns. He decided that this matter was one with which the "Division" could not deal. It was therefore resolved to refer the question of the appointment of the medical staffs of the Hamilton and Casterton Hospitals to the Branch Council for a ruling.

#### Fees for Night Visits.

THE members resolved that an extra fee should be charged for visits to patients' houses between the hours of eight o'clock in the evening and eight o'clock in the morning.

#### Clinical Lectures.

IT was decided to ask members who attended the clinical meetings, to contribute five shillings toward a fund to defray the expenses of a lecturer from Melbourne. The meeting further resolved to request the Branch Council to make a special grant for this purpose.

#### Membership of "Divisions."

THE members determined to forward a request to the Branch Council to ascertain whether members of the Branch residing in Terang, Camperdown and towns in the vicinity would prefer to be enrolled as members of the "South-Western Division" rather than as members of the "Southern Division," as it would be easier for them to attend the meetings of the former body.

#### Clinical Demonstrations.

DEMONSTRATIONS of patients suffering from pathological conditions requiring medical and surgical treatment were given in the evening at the Warrnambool Hospital. Some pathological specimens were also presented.

#### Vaccines and Sera.

DR. W. C. SAWERS, a member of the staff of the Commonwealth Serum Laboratories, read a paper on the preparation and uses of vaccines and sera.

### NOMINATIONS AND ELECTIONS.

THE undermentioned have been nominated for election as members of the New South Wales Branch of the British Medical Association:

HANKINS, SYDNEY HAMILTON, M.B., Ch.M., 1923 (Univ. Sydney), Angledool.

GREEN, JAMES CARLTON, M.B., Mast. Surg., 1921 (Univ. Sydney), Punchbowl Road, Punchbowl.

ROPER, CECIL VALENTINE, M.B., Ch.M. 1922 (Univ. Sydney), 107, Shadforth Street, Mosman.

### NOTICES.

THE COUNCIL OF THE QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION announces that the following arrangements have been made.

July 5, 1923.

*At the Belle Vue Hotel, Brisbane.*

ANNUAL DINNER of the Queensland Branch. The guests of honour will be Dr. George E. Rennie and Dr. W. H. Crago, of Sydney.

July 6, 1923.

*At the B.M.A. Building, Adelaide Street, Brisbane.*

GENERAL MEETING; DR. GEORGE E. RENNIE: "Glycosuria and Diabetes."

COUNTRY MEMBERS are requested to intimate to the Honorary Secretary their intention to be present at the dinner not later than June 28, 1923.

THE COUNCIL OF THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION has arranged the following provisional programme of the Branch meetings. The Scientific Committee reserves to itself the right to modify the arrangement, but it is hoped that no changes will be necessary.

July 4, 1923.

*At the Walter and Eliza Hall Institute of Research in Pathology and Medicine, Melbourne Hospital, at 8.15 p.m.*

MR. W. KENT HUGHES: "Small Defects that Cause Serious Foot Disability and Their Treatment: Corns, Bunions, Hallux Valgus, Hammer-Toe, Weak Ankles, Flat Foot, including Metatarsalgia."

August 1, 1923.

CLINICAL MEETING at the Alfred Hospital.

September 5, 1923.

*At the Walter and Eliza Hall Institute of Research in Pathology and Medicine, Melbourne Hospital, at 8.15 p.m.*

DR. IVAN MAXWELL: "Modern Views of Asthma, Hay Fever and Allied Disorders, such as Angioneurotic Oedema, Urticaria and Serum Sickness."

October 3, 1923.

CLINICAL MEETING at St. Vincent's Hospital.

## Correspondence.

### THE VICTORIAN COMMISSION OF PUBLIC HEALTH.

SIR: Medical practitioners and nurses may be interested to learn that the Victorian Commission of Public Health, a body that has brought itself recently into the limelight by trying to force boarding houses to have one bath to ten boarders, even where there is no assured water supply, allowed the owner (a registered "Gamp") of a registered private hospital to keep as a boarder, among many others, a patent medicine vendor who canvassed the district, offering to cure any disease for eight pounds down. I have been informed that this patent medicine vendor obtained about fifty pounds worth of victims.

When this, among other complaints, was reported, the Commission accepted the "Gamp's" explanation without any comment, although the penalty under the regulations for keeping any sort of boarder is a fine up to twenty pounds. On the other hand several trained nurses have complained to me that the Commission's inspectors have made a fuss because the numbers were not painted on their hospital doors and the fire buckets were not quite full. The Commission recently prosecuted a suburban council for not having a bioscope shutter in its picture theatre; however, the case was dismissed, the magistrate commenting on the absurdity of taking the case to a court.

I believe that the latest life-saving proposal of the Commission is to have the walls of school dormitories painted green. This wonderful Commission will not explain its methods to me and I shall be pleased if any of your readers can do so.

Yours, etc.,

"PUZZLED."

June 11, 1923.

### A UNIVERSITY CHAIR OF MIDWIFERY.

SIR: As attention has been directed to the importance of raising the status of midwifery in the medical curriculum at Sydney University by the creation of a chair of midwifery, I beg to refer to the inaugural address of the new occupant of that position in Edinburgh, as reported in *The British Medical Journal*, October 21, 1922.

Professor B. P. Watson, referring to his ten years' experience as Professor of Obstetrics and Gynaecology in the University of Toronto—he having taken from Edinburgh to Canada the methods of teaching and training which had made the Edinburgh School famous throughout the world—stated: "In returning to Edinburgh, I feel that I have the same responsibility to the University of Toronto and to Canada in bringing here all the best that I have learned in that large and progressive medical school, and in that great and growing Dominion."

Professor Watson, speaking of the high incidence of puerperal mortality, both maternal and foetal, expressed the opinion that "if the principles of antiseptic and aseptic surgery were applied as rigidly in private as in hospital obstetric practice, the mortality from puerperal sepsis would practically disappear."

As Dr. Fourness Barrington last year emphasized in his presidential address, most of the complications arising in pregnancy, in labour and after labour are preventable, so also Professor Watson who maintained that the progress which midwifery has made in the last twenty years and is destined to make in the next twenty, is along the lines of preventive medicine which as applied to obstetrics means ante-natal care during pregnancy, a minimum of interference during labour, the most rigid attention to asepsis and the earliest possible carrying out of surgical interference when it is required.

Reference is made to the fact that a great part of midwifery practice is in danger of passing out of the hands of the medical profession into the hands of certified midwives. Although the training the midwives receive and the work they do is good, often that training is received at the expense of the medical student and the work of the

midwives, especially in the all-important branch of ante-natal care, is limited by their having no general medical education.

Professor Watson says: "If we in Britain are to keep abreast of what our cousins overseas are doing, we must be prepared to give a much more thorough and intensive training in midwifery to our medical students. A certain part of the medical course must be set apart for clinical obstetrics and gynaecology, so that the student may concentrate upon them—live, as it were, in the atmosphere of them. During that time he ought to see all the work of the maternity hospital, the ante-natal clinic, the technique in the labour room, the care of the newly born child, the after care of the mother and the post-natal clinic."

In Australia and New Zealand with our unenviable record of maternal mortality, we might well imitate Canada in establishing chairs of midwifery and gynaecology in our medical schools and raise the whole training of our future medical practitioners in these subjects.

As this is a provision which more intimately concerns women than men, I have sometimes wondered why our women medical practitioners have not made a special effort to secure more recognition for the teaching of midwifery in Australia.

Yours, etc.,

J. S. PURDY.

Sydney, June 12, 1923.

### "ETHANESAL."

SIR: In *The Medical Journal of Australia* for May 19, 1923, appears a review of Dr. Hadfield's excellent little book: "Practical Anæsthetics for the Student and General Practitioner." Amongst other criticisms made by the reviewer were the following:

"It is to be regretted that notice is given in text-books to such substances as 'Ethanosal.' The announcement by Cotton of his discovery that pure ether has no anæsthetic properties . . . does not appear to have been confirmed in research by others. . . . Exploitation of anæsthetists with empirical mixtures of ether with more or less of 'certain ketones' . . . savours of charlatanism and should not be countenanced by notices in medical literature."

Cotton's discovery was confirmed by Dr. J. E. Lombard, of New York in 1920 and also by Dr. Mackenzie Wallis a little later, as was mentioned in your subleader of August 27, 1921. "Ethanosal" was considered a sufficiently important matter for an address by Dr. H. E. G. Boyle, the official representative of the Royal Society of Medicine, at the joint meeting of the American Medical Association and the American Anæsthetists, at Boston. Dr. Boyle is Anæsthetist to and Lecturer on Anæsthesia at St. Bartholomew's Hospital and the originators of "Ethanosal" are also on the staff of that hospital.

"Ethanosal" has been extensively tried by anæsthetists in England, Canada, the United States of America and other countries. The results obtained have naturally varied somewhat with different observers and different methods, but many of them have recorded the conviction that "Ethanosal" has a definite place as an anæsthetic and is better than ordinary ether in general.

I obtained a supply of "Ethanosal" from England and have used it at the Adelaide Hospital, Adelaide Children's Hospital, the Repatriation Hospital, Keswick, and in private work. The cases have included many varied operations, from adenoids to a cerebellar tumour and in patients from the age of twenty-four hours to eight-four years.

"Ethanosal" has been administered by the open method, semi-open method, warm vapour using the "Shipway" apparatus, as an adjuvant to nitrous oxide and oxygen, in mixtures varying from 3% of chloroform to 66% and also in sequence anæsthesias. The number of administrations, though small—about two hundred—has impressed on me that "Ethanosal" has some general advantages over ether and in certain cases is the anæsthetic of choice. The smell is less unpleasant than ether and is more rapidly eliminated during recovery. Salivation is much less and a strong vapour produces less coughing. Recovery is quicker.

I consider "Ethanosal" the anæsthetic of choice for cleft palate in young children, snare tonsillectomy in children

and as an adjuvant to nitrous oxide and oxygen it is decidedly superior to ether. I do not often use it by the open method in adults on account of the large amount required owing to its volatility and on account of the expense entailed. The signs of anaesthesia are rather different and need to be learnt.

Yours, etc.,

GILBERT BROWN.

Adelaide, June 14th, 1923.

#### THE WASSERMANN REACTION.

SIR: In his letter of June 2, Dr. Tebbutt mentions that certain institutions have failed to take advantage of recent methods in the performance of the Wassermann reaction. This, in my opinion, has occurred because of the employment by them of laboratory assistants to carry out this test. The Medical Research Committee of Great Britain strongly advises against this practice, stating "that in no circumstances should the reputation of the pathologist in charge be used as 'cover' for the work of an assistant, however long his experience or however great his manipulative skill." The result of this practice has been that the pathologists in charge of these laboratories have lost touch with the technique of the test and have not put into use the recent advances made in serological work, so that these laboratories have frequently failed to elicit a positive reaction where a more sensitive test is required as in latent, tertiary and para-syphilitic conditions. With the increase of the sensitiveness of the Wassermann reaction the necessity for carefulness has been accentuated and the test should be made by a qualified pathologist who, when actively engaged in this work, is not likely to consider that the method of performing it was crystallized many years ago, but will try out and adopt or discard any suggested improvements in this or the complement fixation tests for hydatid, gonorrhoea and tubercle infections, which, thanks to the advent of the ice box method in the conduct of these tests, are destined to be of increasing importance.

Yours, etc.,

CHARLES BADHAM,

Assistant Microbiologist.

Department of Public Health,  
New South Wales,  
June 5, 1923.

SIR: Both the report given by Dr. E. H. Molesworth in your journal (THE MEDICAL JOURNAL OF AUSTRALIA, May 12, 1923, page 529) and Dr. Tebbutt's letter (THE MEDICAL JOURNAL OF AUSTRALIA, June 5, 1923, page 624) commenting thereon were of particular interest to me and I would be glad if you could find space to print some remarks relative to the points raised by Dr. Tebbutt.

In the first place I would like to congratulate Dr. Tebbutt on his advocacy of the ice box method of technique. From his remarks it would appear that this method was not used in the test on the patient in question and it would be interesting to know whether the serum has been since tested by the ice box method and if so, what result was obtained.

Dr. Tebbutt's experience that the method of prolonged fixation in the cold is superior to the rapid warm method is confirmatory of the results previously given by Dr. Fairley and myself and needs no comment other than an expression of regret that more laboratory workers have not been interested sufficiently to compare the results given by the two different methods. Had they done so, the more sensitive method of detecting the presence of Wassermann substance afforded by the use of prolonged fixation in the cold would be more universally used.

Dr. Tebbutt states that in his opinion the patient referred to by Dr. Molesworth was not suffering from secondary syphilis or else the Wassermann reaction was missed through some error. In support of this he quotes Fairley's and my own results previously published, a reaction being obtained in 100% of cases by both workers when the ice box method of technique was used as against 97.7% (Fairley) and 96.8% (Shearman) of cases showing the reaction by the rapid warm method.

One authority has stated that no opinion should be given as to the superiority of any method of technique until a series of at least five thousand cases had been tested. While I do not need such convincing proof as this to enable me to formulate an opinion on any particular method, I would hesitate to go so far as Dr. Tebbutt in stating that with the use of a cold fixation method a failure on the part of a serum to react cannot occur during the secondary stage of syphilis.

Such a failure to react may reasonably be expected to occur under two conditions:

The first is that mentioned by Dr. Molesworth as a possible explanation of the repeated failure to obtain a reaction in this instance. Dr. Molesworth suggested that this failure to react was associated with a low degree of personal resistance which in turn seems to be associated with a failure to produce those substances which in the serum of an infected person produce a Wassermann reaction.

Dr. Tebbutt disagrees with this and points out that Wassermann substance and syphilitic immune body are different entities and that the measure of the first affords no guide to the degree of syphilitic immunity. Granted that this is correct, it in no way disproves Dr. Molesworth's argument.

Most workers now agree with Dr. Tebbutt's description of Wassermann substance, *id est*, that it is a lipotropic substance resulting from the biological activities of the spirochete. It is in fact almost universally agreed that this so-called Wassermann substance occurs as a by-product of the process of disintegration resulting from the fight between spirochete and body tissues. As I have pointed out in a previous communication, with such a hypothesis as this it is to be expected that when the invading organisms are overwhelming in their action and the body is unable to marshal its defensive forces, there is no Wassermann substance formed because of the failure on the part of the tissues to react to the invasion. In confirmation of this view it has been shown that when death is impending a serum, which previously reacted, fails to give a reaction.

The second condition under which the serum of a secondary syphilitic may fail to react even when the ice box technique is used, occurs when in the test a complement is used of low fixability. This condition is the more likely to operate with those workers who use in the test an amount of complement measured in hæmolytic units, especially when, as sometimes occurs, a low degree of fixability is associated with a high degree of hæmolytic activity. I fail to see how any serologist can justify a method of technique in which the dose of complement used is determined solely by a preliminary titration of the hæmolytic activity either with or without antigen, while the fixability, which is of more consequence, is ignored.

Unfortunately I have not my records by me, but I can recollect one case—a patient with active lesions I think of a tertiary nature—in whom a failure to obtain a reaction was due to the low fixability of the complement used, the result being that the dose of antigen used in the test which normally would have been well within limits, was actually beyond the antigenic titre for that complement. When the test was repeated with the dose of antigen within the antigenic titre, a moderately strong reaction was obtained. This was confirmed by repeating the test with a complement of more normal range of fixability. Such complements are met with but rarely, but when they occur a failure to react may result with an otherwise strongly "positive" serum, especially if a method is used in which increasing doses of complement are used as a measure of the quantitative result and if the doses used are in relation to one phase only of complementary activity, *id est* its power to facilitate hæmolysis.

Under either of these two conditions, I am of opinion that a failure to react may occur in the invasive stage and like Dr. Molesworth I am of opinion that the failure to react in this instance was due to a lack of response on the part of the individual tissues to react against the invading organism.

A somewhat similar case to that quoted by Dr. Molesworth occurred in my own experience two or three years ago and a response to the test could not be elicited for



some considerable time in spite of the presence of a rupial rash, nor did the condition respond in the slightest to intravenous therapy until some four or five injections (0.5 gramme each) of "Galyl" had been given. The patient whose serum I tested again shortly before leaving Perth, still gives a strong reaction to the test.

Yours, etc.,

CYRIL H. SHEARMAN.

26, College Street,  
Sydney, June 18, 1923.

## Proceedings of the Australian Medical Boards.

### NEW SOUTH WALES.

THE undermentioned have been registered under the provisions of the *Medical Act, 1912 and 1915*, as duly qualified medical practitioners:

ABRAMOVITCH, SUZANE, M.B., Ch.M., 1923, 100, Alice Street, Newtown.

BOSTOCK JOHN, M.R.C.S. (Eng.), L.R.C.P. (Lond.), 1913; M.B., Bac. Surg., 1914 (Univ. Lond.), Mental Hospital, Callan Park.

FEATHERSTONE, FRANK RICHARD, L.R.C.P. (Edin.), 1901; L.R.C.S. (Edin.), 1901; L.F.P.S. (Glas.), 1901; L.A.S. (Lond.), 1900. Red Cross Home, Turramurra.

FINLAY, CLYDE CECIL, M.B., Ch.M., 1923 (Univ. Sydney), 2, Orr Street, Bondi.

FRASER, STUART, M.B., Bac. Surg., 1923 (Univ. Melbourne), Lismore.

LEY, THOMAS URBAN, M.B., Bac. Surg. 1922 (Univ. Melbourne), Wagga Wagga.

MONSON, ROBERT BERNARD PEARSON, M.B., Ch.B., 1911; M.D., 1916 (Univ. New Zealand), F.R.C.S. (Edin.), 1921, Macquarie Street, Sydney.

MURRAY, ANGUS JOHNSTON, M.B., Ch.M., 1923 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.

THOMSON, JOHN GEMMILL, L.R.C.P. (Edin.), 1893; L.R.C.S. (Edin.), 1893; L.F.P.S. (Glas.), 1893, Marlow Street, Campsie.

WILLIAMS, DARCY AMBROSE, M.B., Ch.M., 1923 (Univ. Sydney), 73, The Boulevard, Dulwich Hill.

### For Additional Registration.

MC CREMIE, DONALD WALTER, Ch.M., 1923 (Univ. Sydney).

Of those whose names are listed in *The Medical Journal of Australia* on pages 541 and 542 and on pages 569 and 570 of May 12 and 19, 1923, respectively, eighty-five have registered the degree of Ch.M., 1923 (Univ. Sydney).

## Books Received.

EXPLORATION CLINIQUE ET DIAGNOSTIC CHIRURGICAL par Félix Lejars; 1923. Paris: Masson et Cie; Royal 8vo., pp. 782, with 907 illustrations in the text. Price, net: Frs. 50 stitched; 60 bound.

TRAITE PRATIQUE DE CYSTOSCOPIE ET DE CATETERISME URETERAL par G. Marlon et M. Heltz-Boyer; Deuxieme Edition, entièrement refondue; 1923. Paris: Masson et Cie; Royal 8vo., pp. 480, with 60 plates in black and in colour and 214 illustrations in the text. Price, net: Frs. 100.

## Medical Appointments Vacant, etc..

For announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xvi.

SYDNEY HOSPITAL: Honorary Surgeon and Honorary Relieving Assistant Surgeon.

## Medical Appointments: Important Notice.

MEDICAL Practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429, Strand, London, W.C.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney	Australian Natives' Association Ashfield and District Friendly Societies' Dispensary Balmmain United Friendly Societies' Dispensary Friendly Society Lodges at Casino Leichhardt and Petersham Dispensary Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney Marrickville United Friendly Societies' Dispensary North Sydney United Friendly Societies People's Prudential Benefit Society Phoenix Mutual Provident Society
VICTORIA: Honorary Secretary, Medical Society Hall, East Melbourne	All Institutes or Medical Dispensaries Australian Prudential Association Proprietary, Limited Mutual National Provident Club National Provident Association
QUEENSLAND: Honorary Secretary, B. M. A. Building, Adelaide Street, Brisbane	Brisbane United Friendly Society Institute Stannary Hills Hospital
SOUTH AUSTRALIA: Honorary Secretary, 12, North Terrace, Adelaide	Contract Practice Appointments at Renmark Contract Practice Appointments in South Australia
WESTERN AUSTRALIA: Honorary Secretary, Saint George's Terrace, Perth	All Contract Practice Appointments in Western Australia
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington	Friendly Society Lodges, Wellington, New Zealand

## Diary for the Month.

- JULY 3.—New South Wales Branch, B.M.A.: Council (Quarterly).  
 JULY 4.—Victorian Branch, B.M.A.: Branch.  
 JULY 6.—Queensland Branch, B.M.A.: Branch.  
 JULY 10.—New South Wales Branch, B.M.A.: Ethics Committee.  
 JULY 11.—Western Australian Branch, B.M.A.: Council.  
 JULY 11.—Melbourne Paediatric Society.  
 JULY 12.—Victorian Branch, B.M.A.: Council.  
 JULY 13.—New South Wales Branch, B.M.A.: Clinical Meeting.  
 JULY 13.—Queensland Branch, B.M.A.: Council.  
 JULY 13.—South Australian Branch, B.M.A.: Council.  
 JULY 17.—New South Wales Branch, B.M.A.: Executive and Finance Committee.  
 JULY 18.—Western Australian Branch, B.M.A.: Branch.  
 JULY 24.—New South Wales Branch, B.M.A.: Medical Politics Committee; Organization and Science Committee.  
 JULY 25.—Victorian Branch, B.M.A.: Council.  
 JULY 25.—Western Medical Association (Parkes), New South Wales.  
 JULY 26.—South Australian Branch, B.M.A.: Branch.  
 JULY 26.—Brisbane Hospital for Sick Children: Clinical Meeting.

## Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to *THE MEDICAL JOURNAL OF AUSTRALIA* alone, unless the contrary be stated. All communications should be addressed to "The Editor," *THE MEDICAL JOURNAL OF AUSTRALIA*, B.M.A. Building, 30-34, Elizabeth Street, Sydney. (Telephone: B. 4635.)

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## Notice.

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